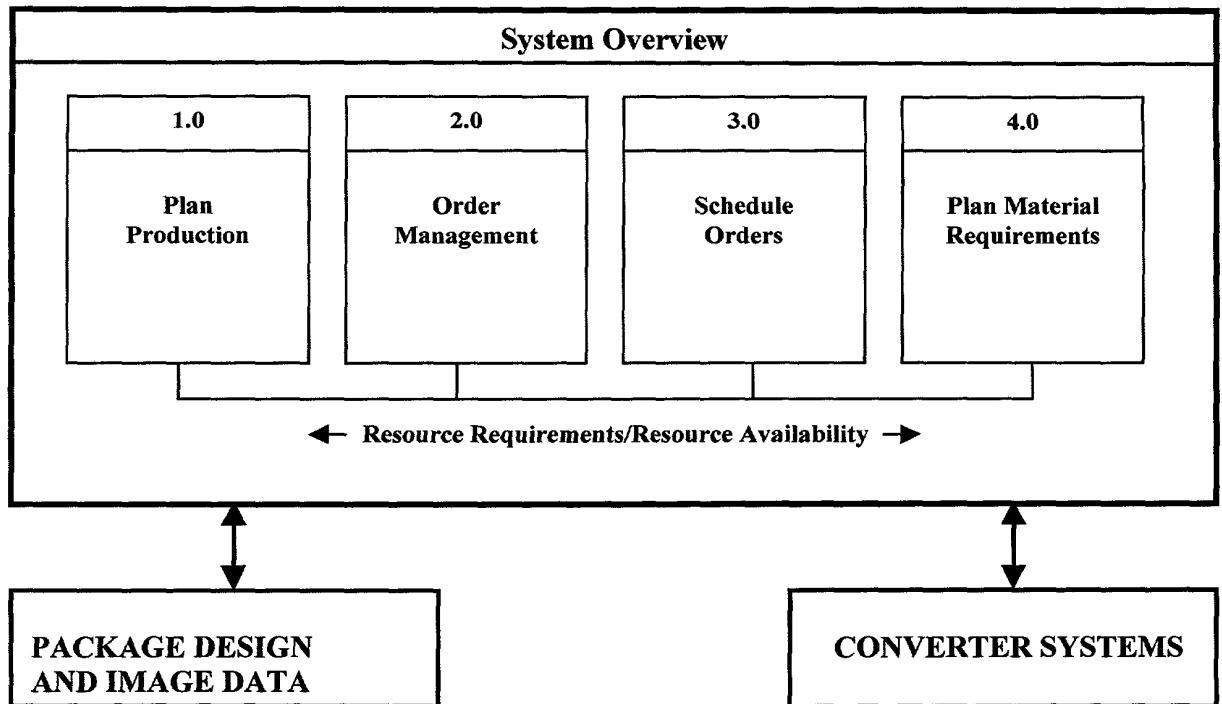


**Figure 1**



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Figure 2

### Production Planning Functional Overview

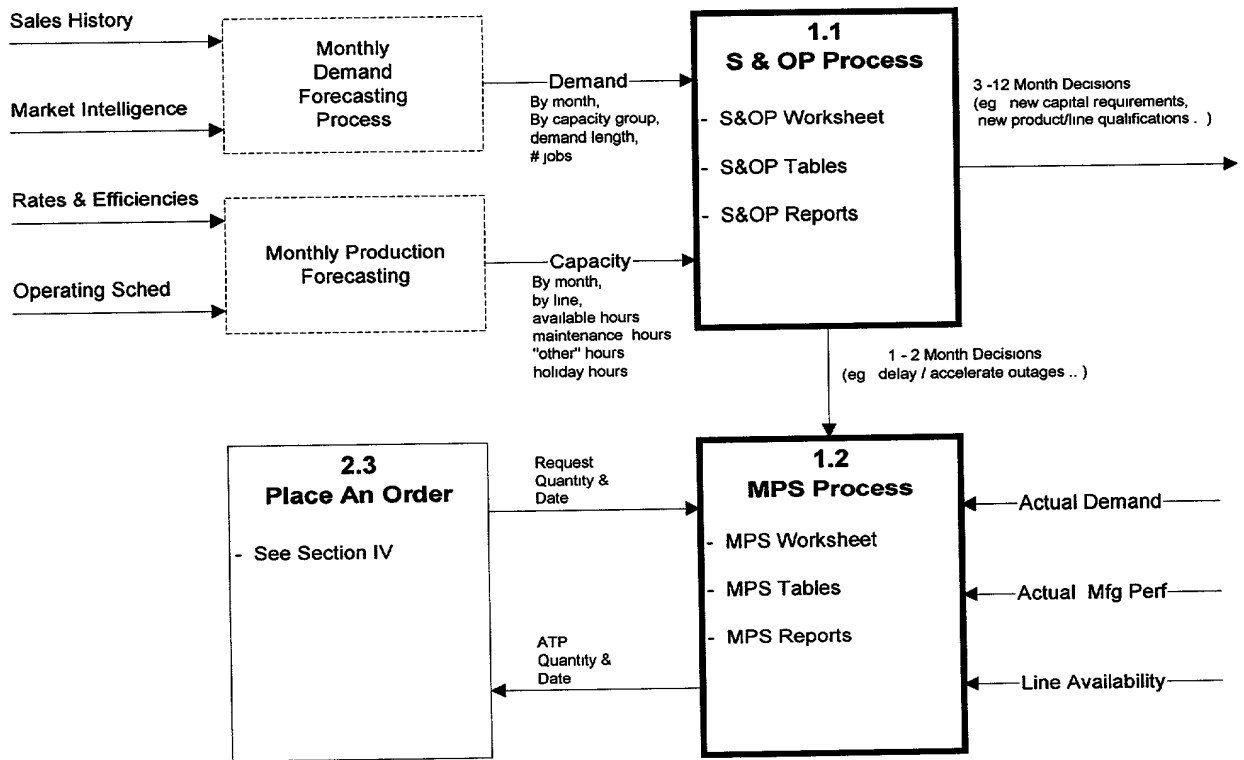
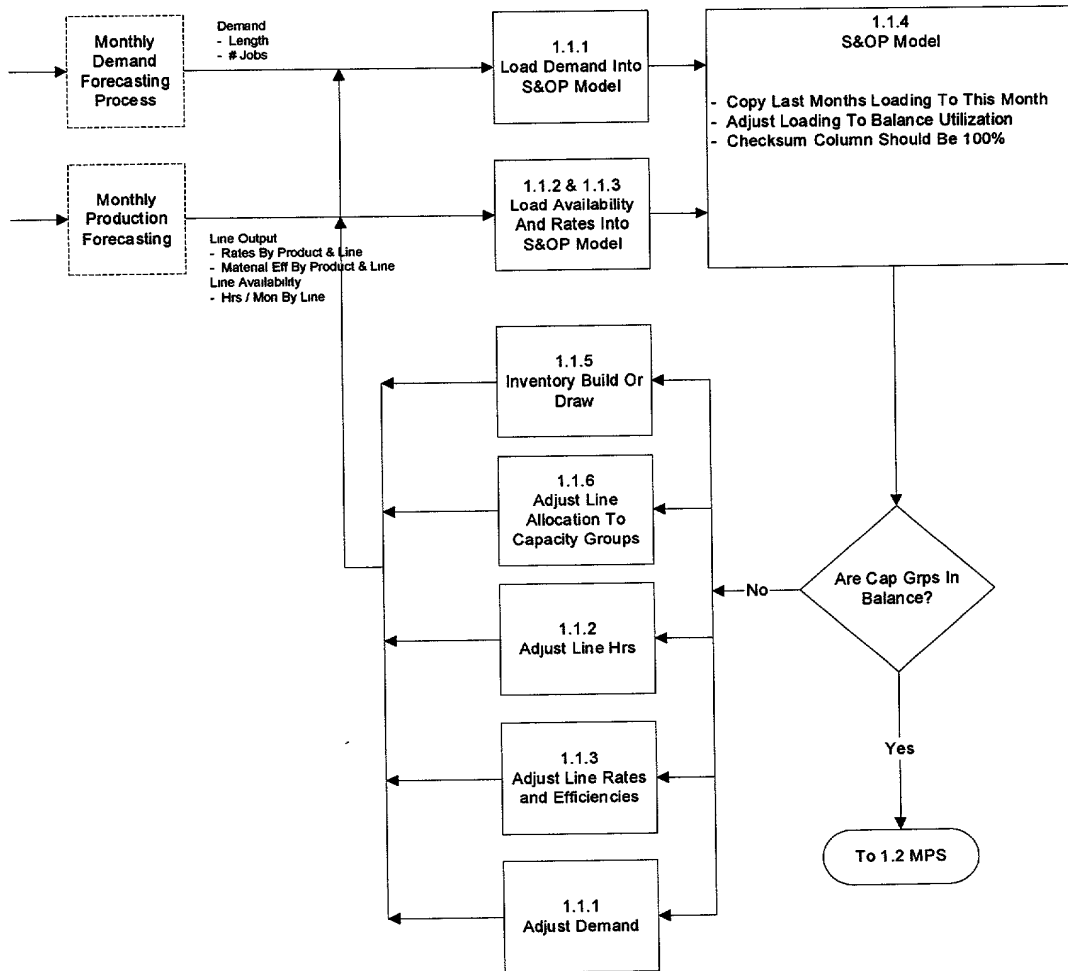
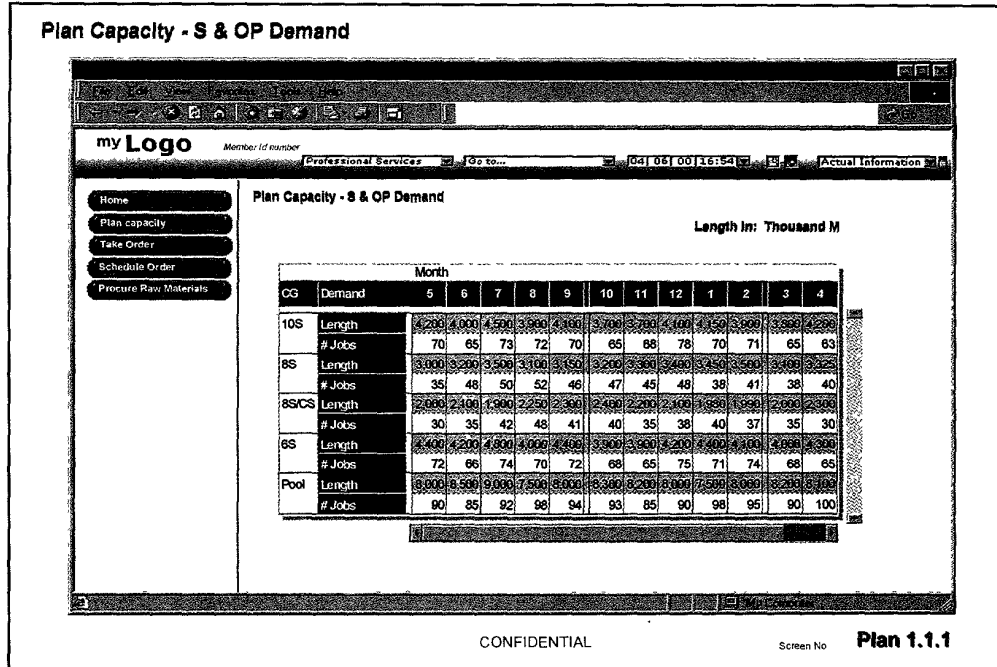


Figure 3

Sales And Operations Planning (Process 1.1)



**Figure 3A**  
**Transaction Summary – S&OP Demand (Process 1.1.1)**



**Initial Processing**

- Lookup all records on Table 1.1.1 using converter\_no from login
- Setup display to include 12 months of data starting with the current month
- Create any records that do not exist and fill with zero's
- Lookup converter demand length unit of measure on the converter\_db using converter\_no

**User Workflow & Resultant Processing**

- Typical
  - Place cursor on the first capacity group (row) of the month (column) for which you want to enter data
  - Enter demand length for the capacity group
  - <Enter> or <Tab> to the next field and enter value
  - Continue down the column or across row entering length and # of jobs for each capacity group
- Exceptional
  - Point and click to select individual cell
  - Change value in cell

**Notes:**

- The user may elect to enter data by row or by column, screen operation should allow both using standard navigation: <enter> moves down a cell, <tab> moves over a cell
- Screen should be horizontally and vertically scrollable

**Notes:**

- The user may elect to enter data by row or by column, screen operation should allow both using standard navigation: <enter> moves down a cell, <tab> moves over a cell
- Screen should be horizontally and vertically scrollable

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**Figure 3B**

**Transaction Summary – S&OP Line Availability (Process 1.1.2)**

**Plan Capacity - S & OP Line Availability**

my Logo Member id number Professional Services Go to... 04/06/00 16:54 Actual Information

Home Plan capacity Take Order Schedule Order Procure Raw Materials

**Plan Capacity - S & OP Line Availability**

Line	Category	Month											
		1	2	3	4	5	6	7	8	9	10	11	12
L 114	Gross Hrs	744	672	744	720	744	720	744	744	720	744	720	744
	Maint Hrs	12	0	0	0	24	0	0	12	0	0	0	0
	Exp Hrs	0	0	0	0	0	0	0	0	0	0	0	0
	Other Hrs	0	4	0	0	0	4	0	0	0	4	0	0
	Holiday	24	0	0	0	24	0	0	0	24	0	48	48
	Net Hrs	708	668	744	712	696	716	744	732	688	740	672	696
L 113	Gross Hrs	744	672	744	720	744	720	744	744	720	744	720	744
	Maint Hrs	0	12	0	0	0	24	0	0	0	0	0	0
	Exp Hrs	0	0	0	0	0	0	0	0	0	0	0	0
	Other Hrs	0	4	0	0	0	4	0	0	0	4	0	0
	Holiday	0	0	0	0	0	0	0	0	0	0	0	0
	Net Hrs	744	656	744	696	744	682	744	736	720	740	720	744

CONFIDENTIAL Screen No Plan 1.1.2

**Initial Processing**

- Lookup all records on Table 1.1.2 using converter\_no from login
- Setup display to include 12 months of data starting with the current month
- Lookup gross hours and holiday hours in the month\_db using month and year
- Create any records that do not exist and fill Maintenance hours, Exp hours, Other Hrs, with zero's
- Calculate Net Hrs = Gross Hrs – Maint Hrs – Exp Hrs – Other Hrs – Holiday Hrs

**User Workflow & Resultant Processing**

- Typical
  - Place cursor on the Maint Hrs for the first production line (row) of the month (column) for which you want to enter data
  - Enter Maint Hrs <enter>
  - Cursor moves to the next field in this column (Exp Hrs)
  - Enter Exp Hrs <enter>
  - Cursor moves to the next field in this column (Other Hrs)
  - Enter Other Hrs <enter>
  - Calculate Net Hrs = Gross Hrs – Maint Hrs – Exp Hrs – Other Hrs – Holiday Hrs
  - Continue down column to next line
- Exceptional
  - Point and click to select individual cell
  - Change value in cell

**Notes:**

- The user may elect to enter data by row or by column, screen operation should allow both using standard navigation: <enter> moves down a cell, <tab> moves over a cell
- Screen should be horizontally and vertically scrollable

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**Figure 3C**  
**Transaction Summary – S&OP Line Rates And Efficiencies (Process 1.1.3)**

my Logo

Member id number

Professional Services

Go to...

04/06/00 16:54

Actual Information

Home

Plan capacity

Take Order

Schedule Order

Procure Raw Materials

Plan Capacity - S & OP Line Rates and Efficiencies

Month 
Year

Class of Demand	L112			L113			L114		
	LS	ME	CO	LS	ME	CO	LS	ME	CO
10S	325	88%	2	350	89%	1.75	0	0%	0
8S	350	89%	1.5	0	0%	0	325	88%	1.5
8S/CS	0	0%	0	250	85%	2.25	0	0%	0
6S/P3	400	90%	1.25	0	0%	0	375	90%	1.25
Pool	375	89%	1.25	400	89%	1.25	350	88%	1.25

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Screen No **Plan 1.1.3**

**Initial Processing**

- Default month and year to current month and year
- Lookup all records on Table 1.1.3 using converter\_no from login and current month and year

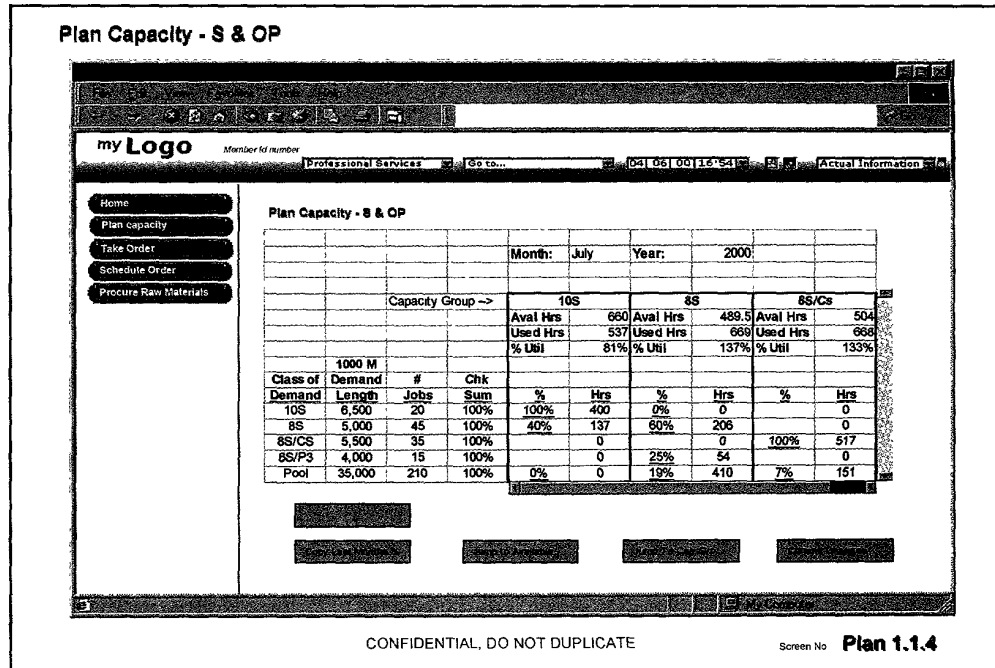
**User Workflow & Resultant Processing**

- Typical
  - Enter month, enter year
  - Place cursor on cell you want to change
  - Enter new data

**Notes:**

- The user may elect to enter data by row or by column, screen operation should allow both using standard navigation: <enter> moves down a cell, <tab> moves over a cell
- Screen should be horizontally and vertically scrollable
- "LS" = Line Speed, "ME" = Material Efficiency, "CO" = Changeover Downtime (Average Per Job)

**Figure 3D**  
Transaction Summary – S&OP Model (Process 1.1.4)



**Initial Processing**

- Lookup Average Material Efficiency(ME), Line Speed (LS) and Changover Time (CO) for each class of demand in Table 1.1.7 using Converter\_no, Month, Year, Class of Demand
- Lookup and display percent demand in table 1.1.4 using Converter\_no, Month, Year, Capacity Group
- Lookup demand and # of jobs in table 1.1.1 using Converter\_no, Month and Year
- Lookup inventory draw and build from Table 1.1.5 using converter\_no, month, year.
- Use inventory build or draw to adjust demand from Table 1.1.1 lookup. Adjusted demand = demand (table 1.1.1) + demand build (table 1.1.5) – demand draw (table 1.1.5).
- Display adjusted demand and # of jobs. Demand = Demand (table 1.1.1) + Demand build (table 1.1.5) – Demand draw (table 1.1.5).
- Lookup and display Avail Hrs in Table 1.1.6 using Month, Year and Capacity Group
- Calc and display Hrs =  $(D \cdot 1000 \cdot P / (ME \cdot LS \cdot 60)) + (\#Jobs \cdot P \cdot CO)$  (D=Demand, P=Percent)
- Calc and display Used Hrs = Sum of Hrs In Each Capacity Group
- Calc and display Utilization = Demand / Capacity

**User Workflow & Resultant Processing**

- Typical
  - Copy forward percentages from last month
  - Adjust percent demand to balance capacity
  - Commit Changes

**Figure 3D (Continued)**  
Transaction Summary – S&OP Model (Process 1.1.4)

Notes:

- Screen should be horizontally and vertically scrollable
- Action button to copy last months %'s
- Screen should have easy links back to Availability Detail, and Capacity Group Data
- Screen should have a commit button

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**Figure 3E**

**Transaction Summary – S&OP Inventory Draw Or Build (Process 1.1.5)**

**Plan Capacity - S & OP Inventory Build Or Draw**

myLogo Monitor ID number Professional Services Go to... 04/08/00 16:54 Actual Information

Home  
Plan capacity  
Take Order  
Schedule Order  
Procure Raw Materials

**Plan Capacity - S & OP Inventory Draw Or Build**

Month May  
Year 2000

Class of Demand	Draw		Build		Comments
	Time (Hrs)	Length	Time (Hrs)	Length	
10S	20	205,240			Draw from last months Mem Day Build
8S			15	225,000	Build for Back To School
8S/CS					
8S/P3					
Pool					

CONFIDENTIAL Screen No **Plan 1.1.5**

**Initial Processing**

- Set month and year to current month and year unless access from 1.1.4. If access from 1.1.4 set month and year to month and year used at the time of the call from 1.1.4.
- Lookup all records on Table 1.1.7 using converter\_no from login and current month and year for all capacity groups
- Lookup all records on Table 1.1.5 using converter\_no from login and current month and year

**User Workflow & Resultant Processing**

- Typical
  - Enter month, enter year
  - Place cursor on cell you want to change
  - Enter new data
  - System calculates length  
Length = (time \* 60) \* Average LS for this capacity group

**Notes:**

- None

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**Figure 3F**

**Transaction Summary – S&OP Adjust Line Allocation To Capacity Groups (Process 1.1.6)**

**Plan Capacity - S & OP Line Allocation To Capacity Groups**

my Logo Member id number Professional Services Go to... 04/06/00 16:54 Actual Information

Home  
Plan Capacity  
Take Order  
Schedule Order  
Procure Raw Materials

**Plan Capacity - S & OP Line Allocation To Capacity Groups**

Month: May  
Year: 2000

Class of Demand	Total Hrs	L112	L12	L13	L14	Row
		%	%	%	%	
Check		100%	100%	100%	100%	
L12	660	50%	20%	50%	0%	0%
LS	480	50%	0%	0%	25%	180
SCIS	500	0%	0%	25%	0%	125
SCIP	330	0%	0%	0%	50%	165
Row	1240	0%	20%	25%	25%	465

CONFIDENTIAL Screen No **Plan 1.1.6**

**Initial Processing**

- Default and display month and year to current month and year
- For converter-no from login and current month and year, lookup:
  - Table 1.1.2 (available hours for each line)
  - Table 1.1.3 (LS, ME, CO by line by capacity group)
  - Table 1.1.6 (all existing entries)
  - Table 1.1.7 (Total Hrs by class of demand)
- Display all Table 1.1.6 records
- Display Total Hrs for each class of demand (from Table 1.1.7)

**User Workflow & Resultant Processing**

- Typical
  - Enter month, enter year
  - Place cursor on the % cell you want to change
  - Enter new data
  - System will calculate:
    - Hrs = % entered \* available hours for that line
    - Check = column sum of % for that line
    - Total Hrs (Table 1.1.7) = Row sum of hours for each capacity group
  - When all changes have been entered, click “DONE”
  - The system checks to insure all lines are 100% allocated. If not, hard error

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### Figure 3F (Continued)

#### Transaction Summary – S&OP Adjust Line Allocation To Capacity Groups (Process 1.1.6)

##### User Workflow & Resultant Processing

- The system generates a table of LS, ME, CO all of the average values for table 1.1.7

LS Average =  $\Sigma$ All lines

(line Hrs for CGD/Total Hrs for CGD) \* Line LS for CGD

ME Average =  $\Sigma$ All lines

(line Hrs for CGD/Total Hrs for CGD) \* Line ME for CGD

CO Average =  $\Sigma$ All lines

(line Hrs for CGD/Total Hrs for CGD) \* Line CO for CGD

- Save Table 1.1.7 value
- Exceptional
  - Point and click to the % cell to be changed
  - Change value in cell

##### Notes:

- The user may elect to enter data by row or by column, screen operation should allow both using standard navigation: <enter> moves down a cell, <tab> moves over a cell
- Screen should be horizontally and vertically scrollable

TABLE 1.1.7

[illegible]

**Plan Capacity - S & OP Display Capacity Group Demand Averages**

myLogo Member ID number: Professional Services Go to... 04 | 05 | 00 | 16:54 Actual Information

Home  
Plan capacity  
Take Order  
Schedule Order  
Procure Raw Materials

Month: May  
Year: 2000

Capacity	Total Hrs	Total Hrs	Ave LS	Ave ME	Ave CO
10C	650.00	327.7	50.5%	1.673	
05	489.50	341.5	69.73%	1.501	
05/05	504.00	250.0	49.6%	2.250	
05/E3	331.00	375.0	101.9%	1.250	
Total	1347.50	1350.0	99.9%	1.224	

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Screen No Plan 1.1.7

## Initial Processing

- Default month and year to current month and year
- Lookup all records on Table 1.1.7 using converter\_no from login and current month and year

## User Workflow & Resultant Processing

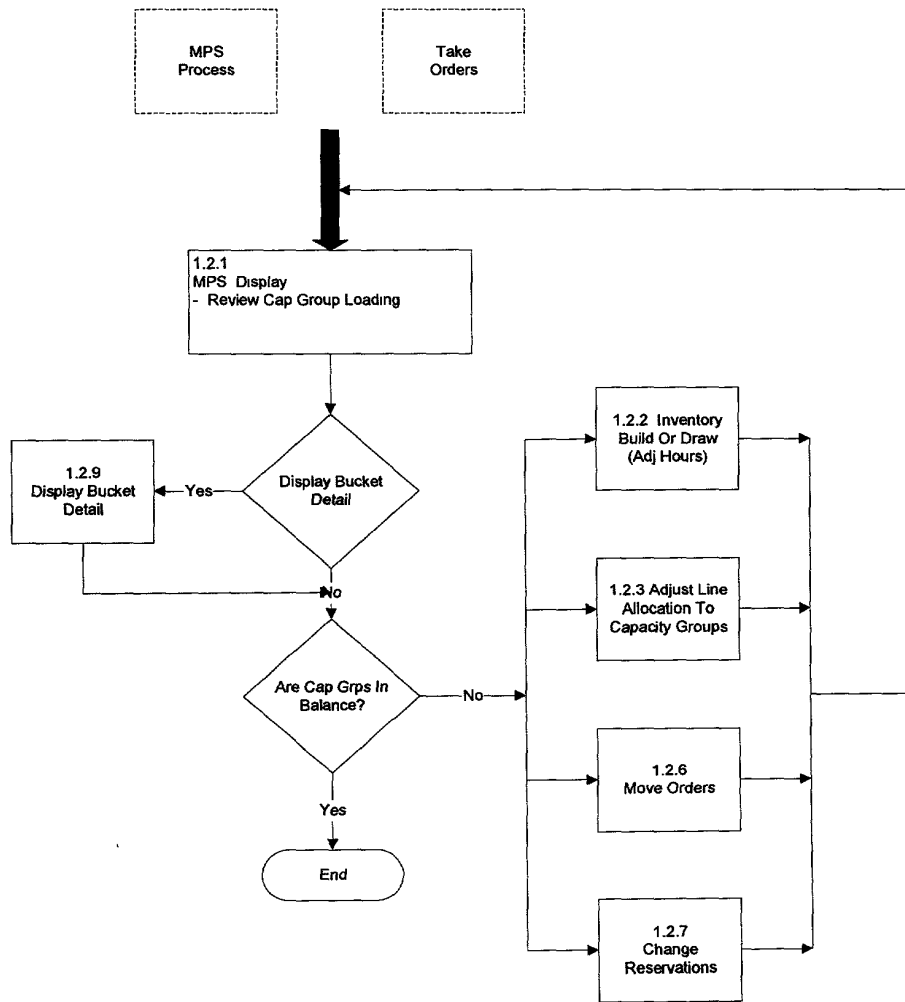
- Typical
  - Enter month, enter year
  - Lookup and display all records for the Month and Year

Notes:

- **Display Only**

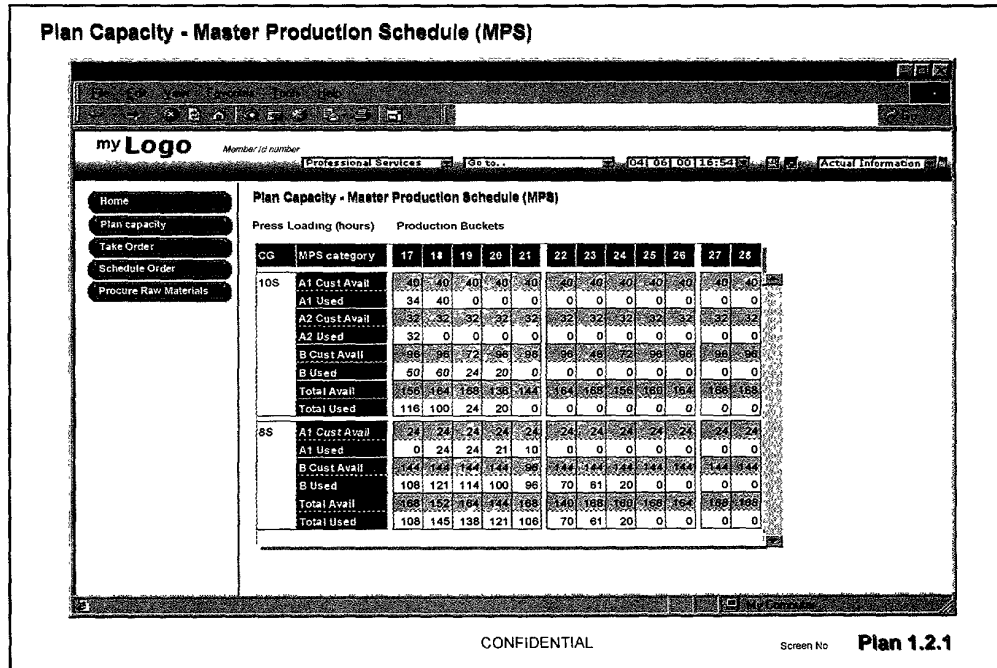
Figure 4

MPS Process – Weekly Process (Process 1.2)



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**Figure 4A**  
Transaction Summary – Plan Capacity – MPS Display (Process 1.2.1)



- Initial Processing**
- Lookup all records on Table 1.2.1 using converter number from login
  - Display all records
- User Workflow & Resultant Processing**
- Typical
    - User may click on Production Bucket # (at top of column, ie// 18) and control should transfer to transaction PLAN1.2.9, Display Bucket Detail.
- Notes:**
- Display Only

**Figure 4B**

**Transaction Summary – Plan Capacity – MPS Inventory Draw Or Build (Process 1.2.2)**

**Plan Capacity - MPS Inventory Build Or Draw**

my Logo Member ID number Professional Services Go to... 04/08/00 16:54 Actual Information

Home  
Plan capacity  
Take Order  
Schedule Order  
Procure Raw Materials

**Plan Capacity - MPS Inventory Draw Or Build**

Capacity Group	Bucket #	Comment	Bucket #	Comment	Bucket #	Comment
105	20	Build Inv for Frito	20	Build Inv for Frito	10	Build Inv for Frito
106	-15	Draw Inv for Nestle				
107						
108						
109						
110						

CONFIDENTIAL Screen No **Plan 1.2.2**

**Initial Processing**

- Lookup all records on Table 1.2.2 using converter number from login
- Calculate “todays” bucket – see algorithm Bucket Calc
- Set display such that initial production bucket is “todays” bucket
- Display all records

**User Workflow & Resultant Processing**

- Typical
  - Use horizontal scrolling to get to the bucket to display
  - Enter an inventory build or draw (in hours for that bucket) for a specific capacity group . Move to comment field and add a comment on the build or draw.

**Notes:**

- None

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	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2
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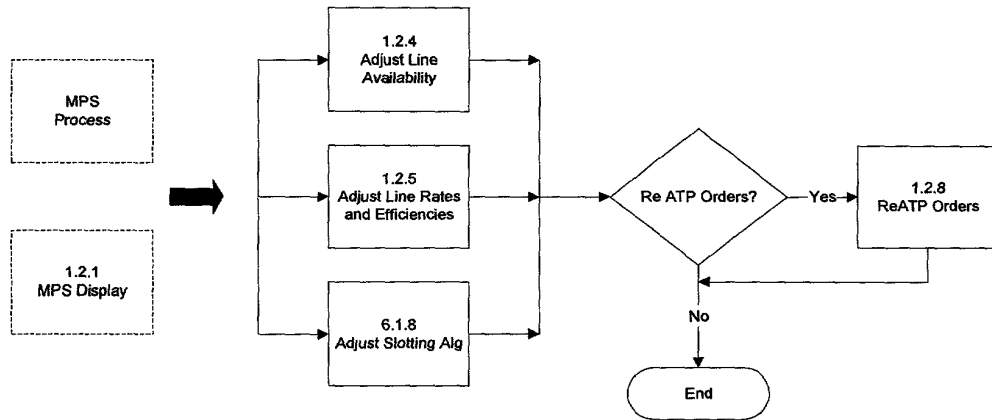
[illegible]

- |                                      |  |
|--------------------------------------|--|
| Initial Processing                   | <ul style="list-style-type: none"> <li>Lookup and display all records on Table 1.2.3 using converter-no, year, and bucket #.</li> </ul>  |
| User Workflow & Resultant Processing | <ul style="list-style-type: none"> <li>Typical             <ul style="list-style-type: none"> <li>User will select a cell and change the percentage.</li> <li>Prior to exiting the screen, all check sum's must be 100% or error.</li> </ul> </li> </ul> |
| Notes:                               | <ul style="list-style-type: none"> <li>None</li> </ul>   |



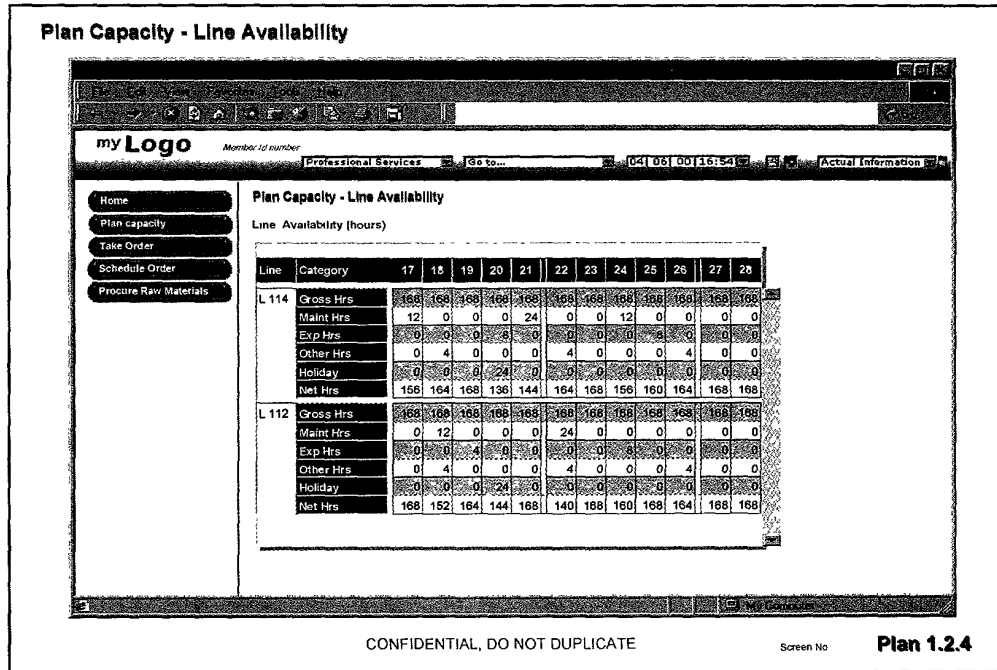
**Figure 5**

**MPS Process – Supporting Processes (Process 1.2)**



FOR SHARING

**Figure 5A**  
**Transaction Summary – Plan Capacity – MPS Display (Process 1.2.4)**



- Initial Processing**
- Lookup all records on Table 1.2.4 using converter number from login
  - Display all records
- User Workflow & Resultant Processing**
- Typical
    - User will click on a cell and change value
    - System should recalculate totals and update the screen
- Notes:**
- None

**Figure 5B**  
**Transaction Summary – Plan Capacity – Adjust Line Rates and Efficiencies (Process 1.2.5)**

Plan Capacity - MPS

my Logo

Member Id number

Professional Services

Go to...

04/05/00 16:54

Actual Information

Home

Plan capacity

Take Order

Schedule Order

Procure Raw Materials

Plan Capacity - MPS, Rates and Efficiencies, Averages

Process Step

Printing

Bucket

17

Year

2000

Class of Demand	Ave LS	Ave ME	Ave C/O
10S	337.73	0.885	1.873
8S	342	0.887	1.500
8S/CS	250	0.837	2.250
6S/P3	375	0.900	1.250
Pool	350	0.880	1.250

Print

Print to File

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Screen No

Plan 1.2.5

- Initial Processing
- Lookup and display all records on Table 1.2.5, using converter-no, process step, year, and bucket.
- User Workflow & Resultant Processing
- Typical
    - User may change process step, bucket, or year.
- Notes:
- Average data should be display only.

**Figure 5C**

**Transaction Summary – Plan Capacity – Adjust Slotting Algorithm (Process 6.1.8)**

**Plan Capacity - Capacity Group Setup**

my Logo Member Id number Professional Services Go to... 04/06/00 16:54 Actual Information

Home  
Plan capacity  
Take Order  
Schedule Order  
Procure Raw Materials

**Plan Capacity - Capacity Group Setup**

Process Step   
Capacity Group Abbreviation   
Capacity Group Description   
Capacity Groups

Priority	Capacity Group	Cylinder Width	Max Stations	Extrusion Lam	Adhesive Lam	Max Process	Max Bounce	Cold Seal
1	Pool	1600	6	N	N	3	3	N
2	6S	1600	6	N	N	2	3	N
3	6SP3	1600	6	Y	Y	3	3	Y
4	8S	1600	8	N	Y	2	3	Y
5	10S	1700	10	Y	Y	3	3	N

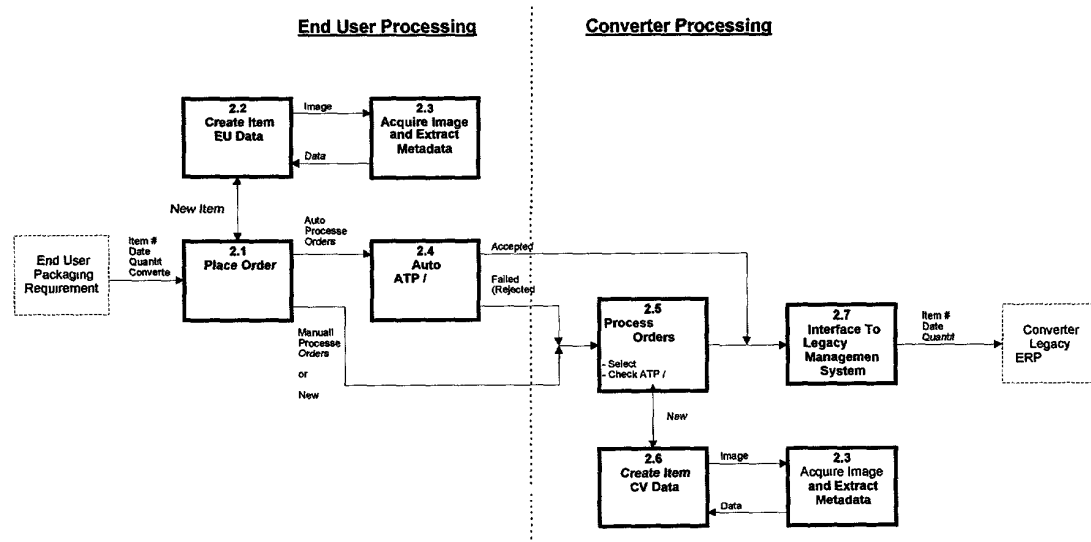
CONFIDENTIAL. DO NOT DUPLICATE Screen No **SU 6.1.8**

- Initial Processing**
- Lookup and display all data on the capacity group DB using converter-no, and process step.
- User Workflow & Resultant Processing**
- Typical
    - User will add a new capacity group (row) to the matrix.
    - System should check that the priority numbers are unique.
- Notes:**
- None

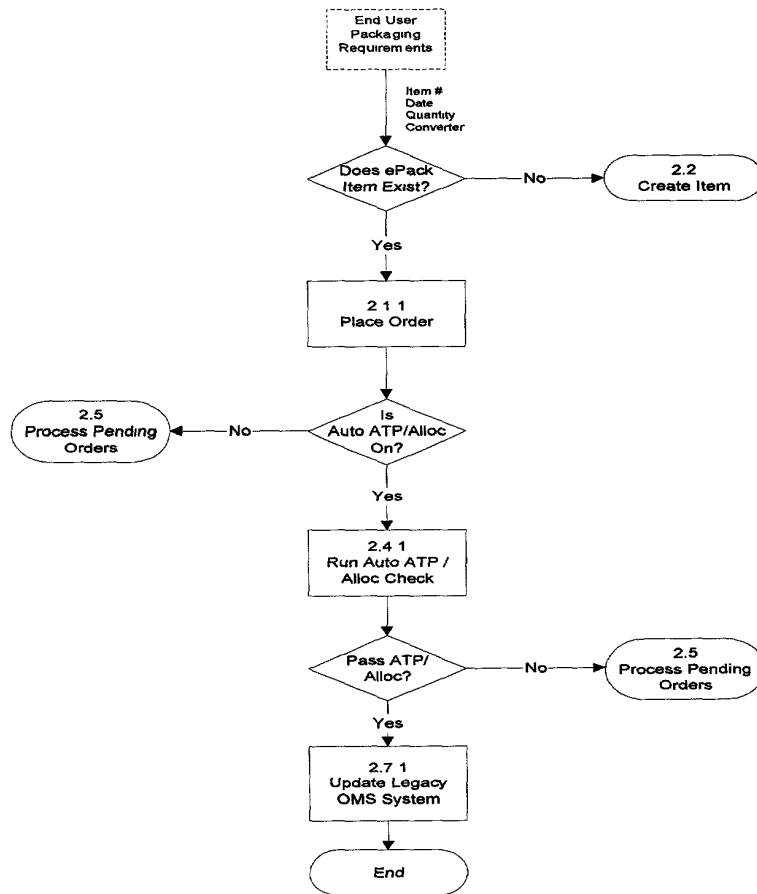
TOP SECRET

Figure 6

Order Management Functional Overview



**Figure 7**  
**Place Order and Auto ATP / Allocation (Processes 2.1, 2.4, 2.7)**



- Place Order (Process 2.1.1). The end user places an order. This is done by specifying the item number, quantity required, date required and converter to produce a given order. If the item does not already exist, the end user can create it.
- Auto ATP / Allocation Check (Process 2.4.1). If the specified converter's automatic ATP/Allocation check is turned on then ATP/Allocation will be run automatically. If the order passes, it will be accepted and transmitted to the converter's Order Management System. Otherwise, the order is placed in a pending order queue.

**Figure 7A**  
**Transaction Summary – Place/Change An Order (Process 2.1.1)**

Place Order - End User

my Logo

Member id number

Professional Services

Go to...

04/06/00 16:54

Actual Information

Home

Plan capacity

Take Order

Schedule Order

Procure Raw Materials

Place Order - End User

PO No

16-2258

Item No

167887-001

Wise

6 Oz Regular Potato Chips

Date Req

04may00

Quantity

476,000

Imps

Quantity

63.467

M

Quantity

2.557

Kg

Status

Pending

Sold To Customer #

158874123

Wise

152 rue de Clemency

B-8762 Selande

Belgium

Ship To Customer #

111533

Wise

Strada Per Pandi, 4

Zona Industriale

Via Polymer

72100 Brindisi, Italy

Target Converter #

225889

MIPA

via Fermo, 26

61100 Pesaro (Italia)

Auto Processing

On

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Screen No

OM 2.1.1

Initial Processing

- None

User Workflow &  
Resultant Processing

- Typical
  - Enter purchase order number from legacy Purchasing system
  - Enter Item No
  - Lookup on Item DB using Item #: item description, end user #, target converter #, yield, cutoff, width
  - Set sold to customer number to end user #
  - Lookup on converter DB using target converter #: converter name, address, and auto processing field
  - Lookup on end user DB using sold to #: customer name, customer address, default ship to customer number
  - Set ship to # to default ship to customer number
  - Lookup on end user DB using ship to #: customer name and address
  - Enter the date required
  - Enter quantity
  - Enter quantity unit of measure
  - Calculate alternative units of measure
 
$$\text{Imps to Mass} = ((\text{cutoff} * \text{width} * \# \text{imps}) / (\text{yield})) / \text{uom1}$$

$$\text{Imps to Length} = ((\# \text{impressions} / \# \text{up}) * \text{cutoff}) / \text{uom2}$$

$$\text{Mass to Imps} = \text{uom3} * (\text{mass} * \text{Yield}) / (\text{cutoff} * \text{width})$$

$$\text{Mass to Length} = \text{uom4} * (\text{mass} * \text{Yield}) / (\text{width} * \# \text{across})$$

$$\text{Length to Imps} = \text{uom2} * (\text{Length} / \text{cutoff}) * \# \text{across}$$

$$\text{Length to Mass} = (\text{Length} * \# \text{across} * \text{width}) / \text{Yield} / \text{uom4}$$

Note: uom# factors are needed because commercial unit of measure conventions in metric and english units of measure are inconsistent.

**Figure 7A (Continued)**  
**Transaction Summary – Place/Change An Order (Process 2.1.1)**

User Workflow &  
Resultant Processing

- Press Submit Order Key
- If AutoATP = "ON" Then
  - Slot order to capacity group (See Algorithms)
  - Calculate production bucket (See Algorithms)
  - Lookup on Capacity group DB using capacity group: average changeover time, average line speed, average material efficiency,
  - Slot order to laminator (if applicable) (See Algorithms)
  - Lookup on Equipment DB using laminator line #: average changeover time, average line speed, average material efficiency
  - Calculate estimated quantity = quantity / (capacity group me \* laminator me \* standard slitler me)
  - Calculate estimated production hours

Press:

#Across = Integer(Max width Capacity Group / Image Width)

# Length = Imps Orders / #Across

Length = (# Length \* Cutoff) / (1000)

AdjLength = Length / Material Eff of Cap Group

Press Hrs = (Length / Average Line Speed Capacity Group) +  
Average Change Over Time for CG

Laminator:

Laminator Hrs = (Length / Material Eff of Laminator / Average Line Speed Laminator) +  
Average Change Over Time for Laminator

Send Order No, Press Hrs, Lam Hrs, Item No, Press Bucket, Lam Bucket, Capacity Group to  
AutoATP Check 2.4.1.

- ELSE (AutoATP = "OFF")  
Change Order Status To "PendingConv"

End

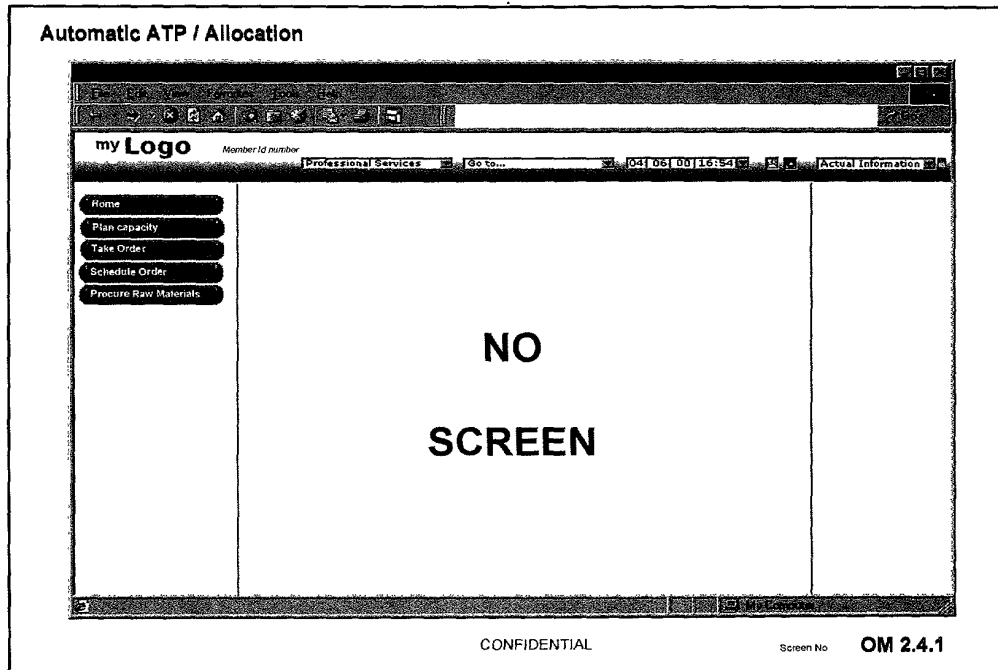
- Exceptional
  - Change Target converter number
  - Lookup on converter DB using converter # and get converter name and address
  - Change ship to customer number
  - Lookup on customer DB using ship to # and get customer name and address
  - Change ship to address
  - Change and reATP order  
Retrieve existing order, display current values, and allow user to reATP the order with or without changes to date and/or quantity.

Notes:

- There should be drop down buttons on the following fields so that the user can do a lookup: Item No, Sold To Customer #, Ship To Customer #, Target Converter, Quantity Unit of Measure



**Figure 7B**  
**Transaction Summary – Automatic ATP / Allocation (Process 2.4.1)**



**Initial Processing**

- Send:
  - Order number
  - Press bucket #
  - Laminator bucket #
  - Required press hours
  - Required laminator hours
  - End user number
  - Item number
- Return:
  - ATP Status
  - Allocation Status
  - Film Status
  - Cylinder Status

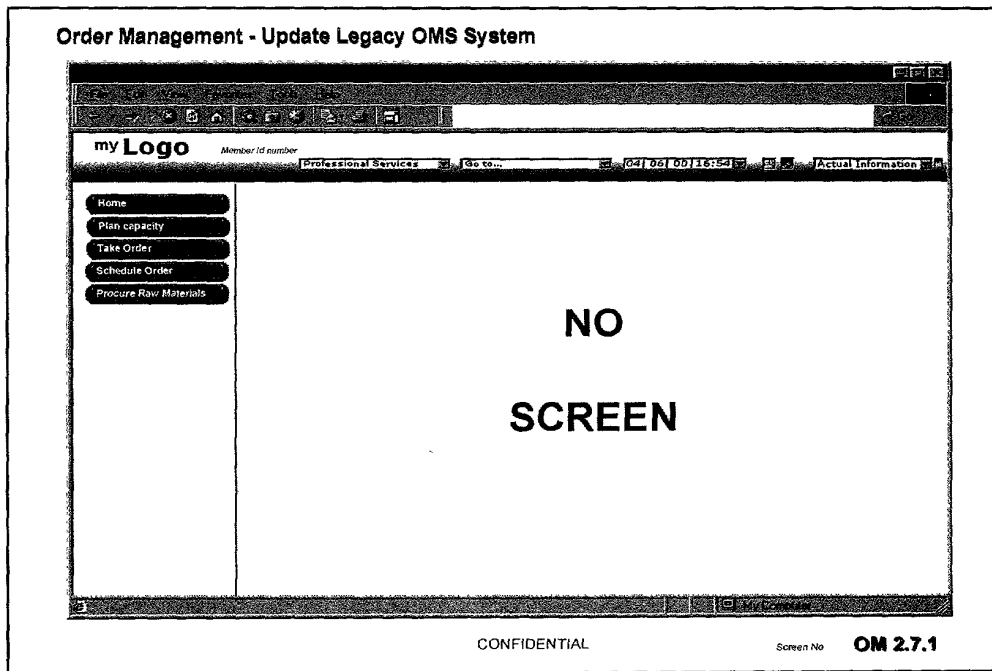
**User Workflow &  
Resultant Processing**

- None

**Notes:**

- See Alg AutoATP for detailed calculations

**Figure 7C**  
**Transaction Summary – Update Legacy OMS System (Process 2.7.1)**



**Initial Processing**

- Send:
  - CV Item #
  - EU Item #
  - End User #
  - End User PO #
  - Quantity requested
  - Quantity unit of measure
  - Date requested
- Return:
  - Order #

**User Workflow &  
Resultant Processing**

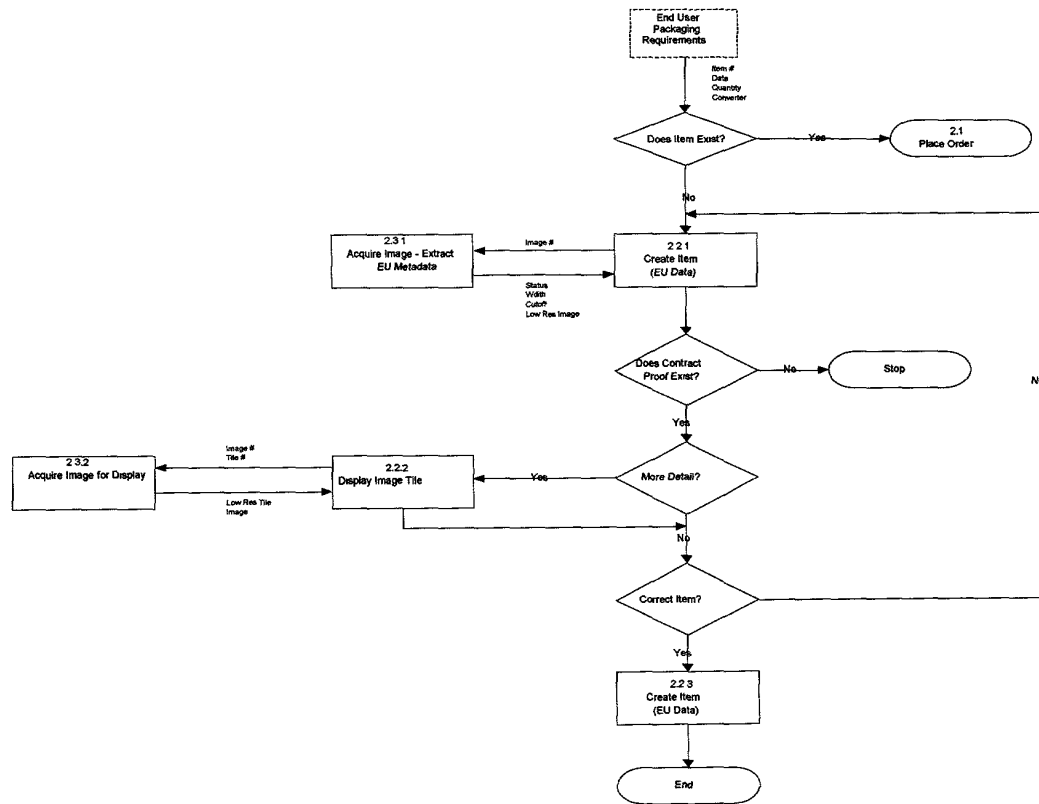
- None

**Notes:**

- None

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**Figure 8**  
**IVC. Process Detail – Item Setup End User (EU), Acquire Image-Extract EU Metadata (Process 2.2, 2.3)**



- Create Item (Process 2.2.1). Create Item, Image Data. The end user creates an item in system. The user enters an item number and an image number. The system interfaces with the Image Acquisition and Metadata Extraction Module to retrieve image status, width, cutoff, and a low resolution image display.
- Acquire Image - Extract EU Metadata (Process 2.3.1). Acquire Image - Extract EU Metadata. The system requests a specific image from any suitable digital workflow. Once the image is retrieved, the system processes the image file to extract image status, width, cutoff, and a low resolution image display. If there is no approved contract proof in response to the system's request, the create item process is stopped.

**Figure 8 (Continued)**

**IVC. Process Detail – Item Setup End User (EU), Acquire Image-Extract EU Metadata (Process 2.2, 2.3)**

- Display Image Tile (Process 2.2.2). The low resolution image display will be segmented into “tiles.” The user can click on a tile and the system will request and display a low resolution image of that tile.
- Acquire Image For Display (Process 2.3.2). Acquire Image For Display. The system makes a specific image and tile # request to the Image Acquisition and Display module. The module returns a low resolution tile image display. If this is not the correct image, the user will can jump back to Create Item (Process 2.2.1) and can enter a different image number.
- Create Item (Process 2.2.3). Create Item, Packaging Structure. The user can enter the package structure.

10/11/11 10:11:11 AM

**Figure 8A**  
**Transaction Summary – Item Definition, Image (Process 2.2.1)**

Item Definition - Image

myLogo

Member ID number

Professional Services

Go to...

04/06/00 16:54

Actual Information

Home

Plan capacity

Take Order

Schedule Order

Procure Raw Materials

Item Definition - Image

Item #

167887-001

Customer #

4568910

Wise

Image #

18904-54978v1

6 Oz Regular Potato Chips

Status


Approved

Width

300 mm

Cutoff

450 mm



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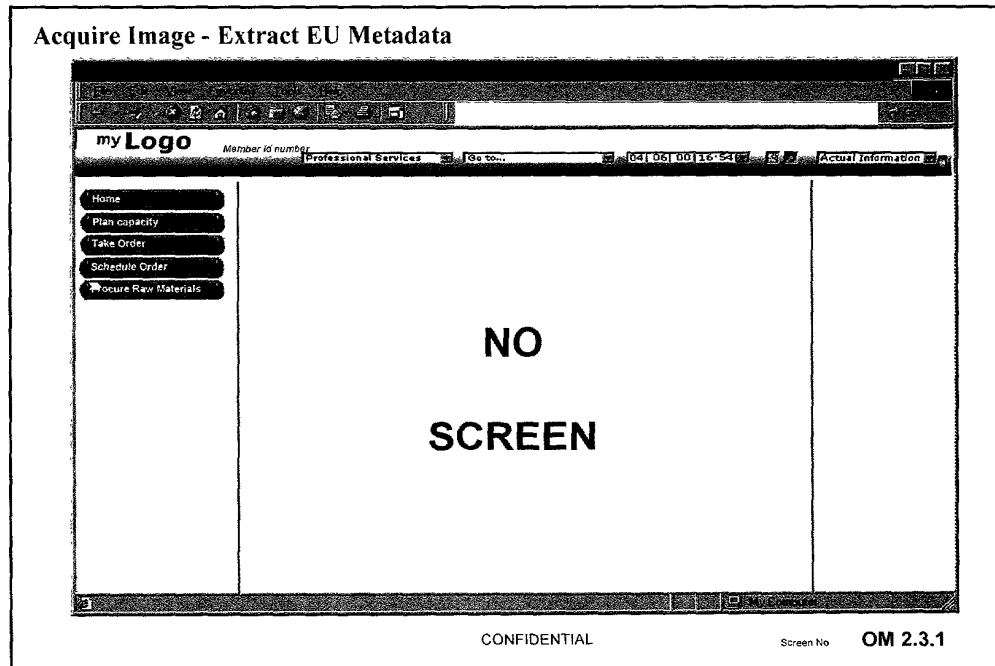
Screen No

OM 2.2.1

- |                                      |  |
|--------------------------------------|--|
| Initial Processing                   | <ul style="list-style-type: none"> <li>• Lookup all records on Table 2.2.1 using enduser_no from login</li> <li>• Default Customer to customer name from login</li> </ul>  |
| User Workflow & Resultant Processing | <ul style="list-style-type: none"> <li>• Typical               <ul style="list-style-type: none"> <li>– Enter Item #</li> <li>– Enter Image #</li> <li>– Interface with the Image Acquisition and Metadata extraction module. Send image number. Receive image status, width, cutoff, and a low resolution image for display.</li> <li>– User clicks on the “Set Up Pkg Structure” button and is transferred to transaction 2.2.3.</li> </ul> </li> <li>• Exceptional               <ul style="list-style-type: none"> <li>– User clicks on the “More Image Detail” button and is transferred to transaction 2.2.2.</li> </ul> </li> </ul> |
| Notes:                               | <ul style="list-style-type: none"> <li>• None</li> </ul>   |

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**Figure 8B**  
**Transaction Summary – Acquire Image - Extract EU Metadata (Process 2.3.1)**



**Initial Processing**

- Send:
  - Image number
- Return:
  - Image Status
  - Image width
  - Image cutoff
  - Low Resolution Image Display file
- Calculations
  - None Required

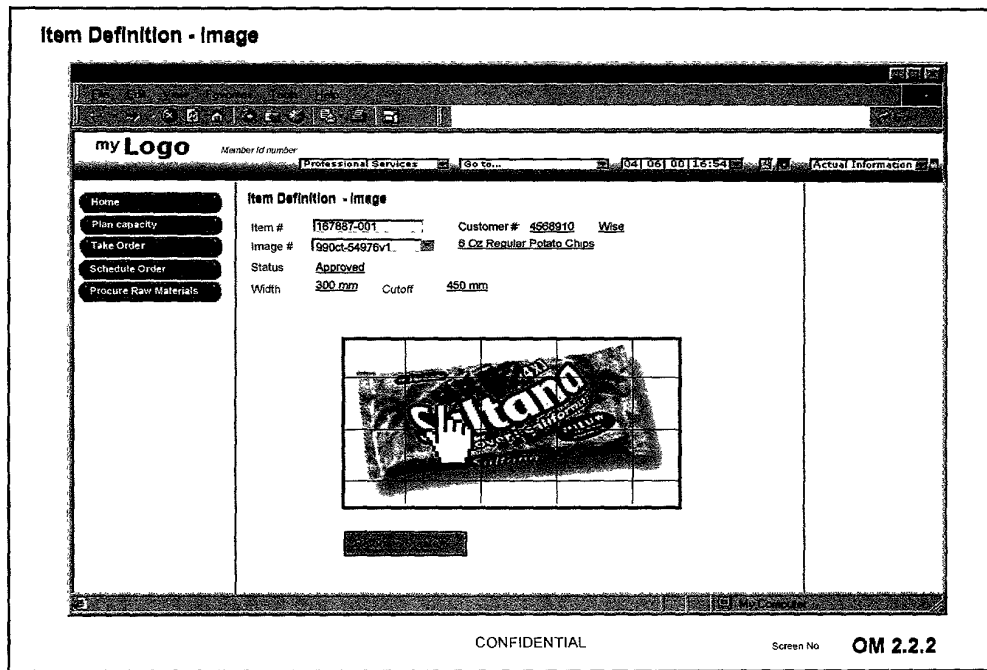
**User Workflow &  
Resultant Processing**

- None

**Notes:**

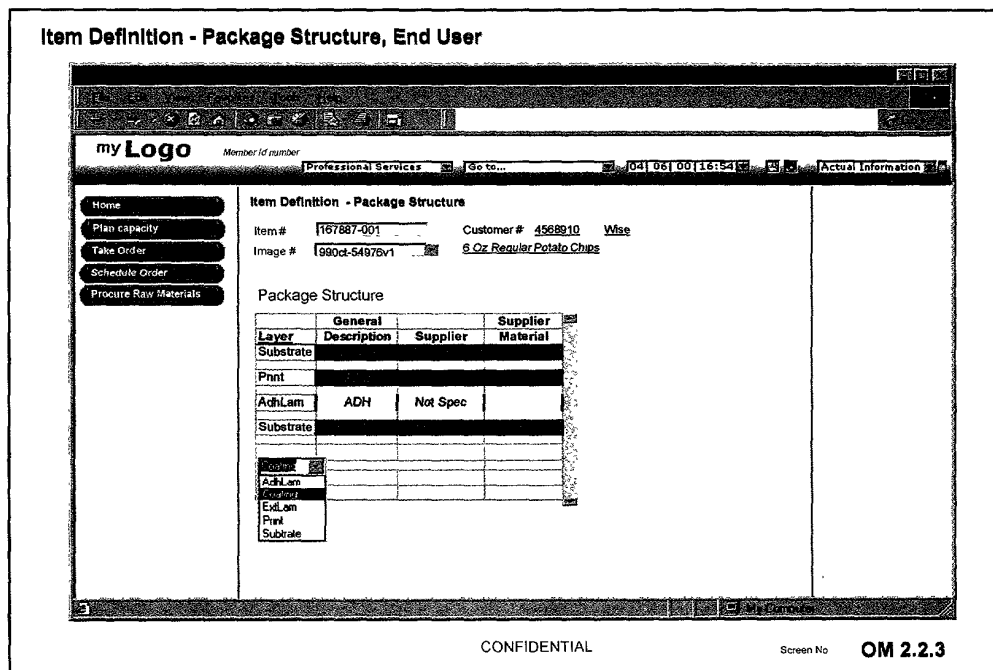
- None

**Figure 8C**  
**Transaction Summary – Item Definition, Display Image Tile (Process 2.2.2)**



- |                                      |  |
|--------------------------------------|--|
| Initial Processing                   | <ul style="list-style-type: none"> <li>• Display image with tile grid lines</li> </ul>   |
| User Workflow & Resultant Processing | <ul style="list-style-type: none"> <li>• Typical               <ul style="list-style-type: none"> <li>– User clicks on one of the “tiles”</li> <li>– The system requests the specified tile from the Image Acquisition and Display Module by sending the image number and the tile number. The module returns a low resolution, full screen image of the tile (Process 2.3.2).</li> <li>– User clicks on “Return to Create” button</li> </ul> </li> <li>• Exceptional</li> </ul> |
| Notes:                               | <ul style="list-style-type: none"> <li>• None</li> </ul>   |

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[illegible]

## Initial Processing

- Lookup allowable items for layer on Table “Layers”

## User Workflow & Resultant Processing

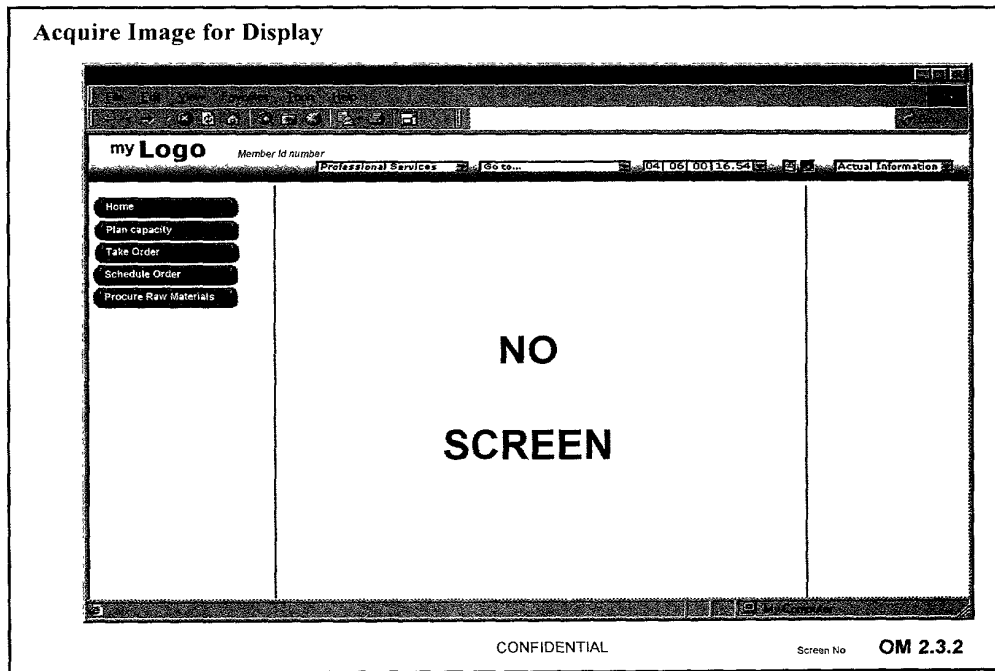
- Typical
  - Pick layer off list
  - Enter all other fields
- Exceptional
  - Point and click to select individual cell
  - Change value in cell

**Notes:**

- The user may elect to enter data by row or by column, screen operation should allow both using standard navigation: <enter> moves down a cell, <tab> moves over a cell
- Screen should be vertically scrollable



**Figure 8E**  
**Transaction Summary – Acquire Image for Display (Process 2.3.2)**



**Initial Processing**

- Send:
  - Image number
  - Tile number
- Return:
  - Full Screen Low Resolution Image Display of tile
- Calculations
  - None Required

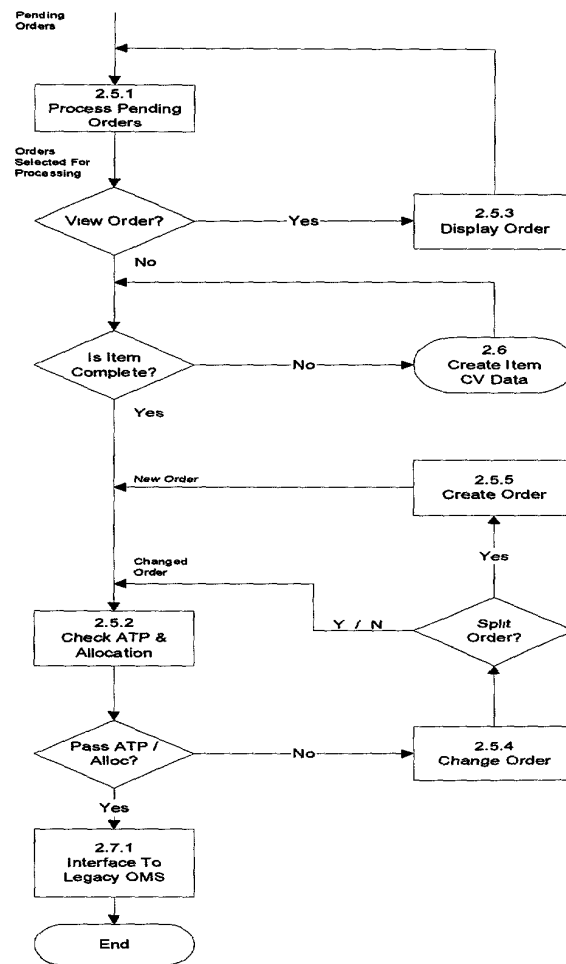
**User Workflow &  
Resultant Processing**

- None

**Notes:**

- None

**Figure 9**  
**Process Pending Orders (Processes 2.5, 2.7)**



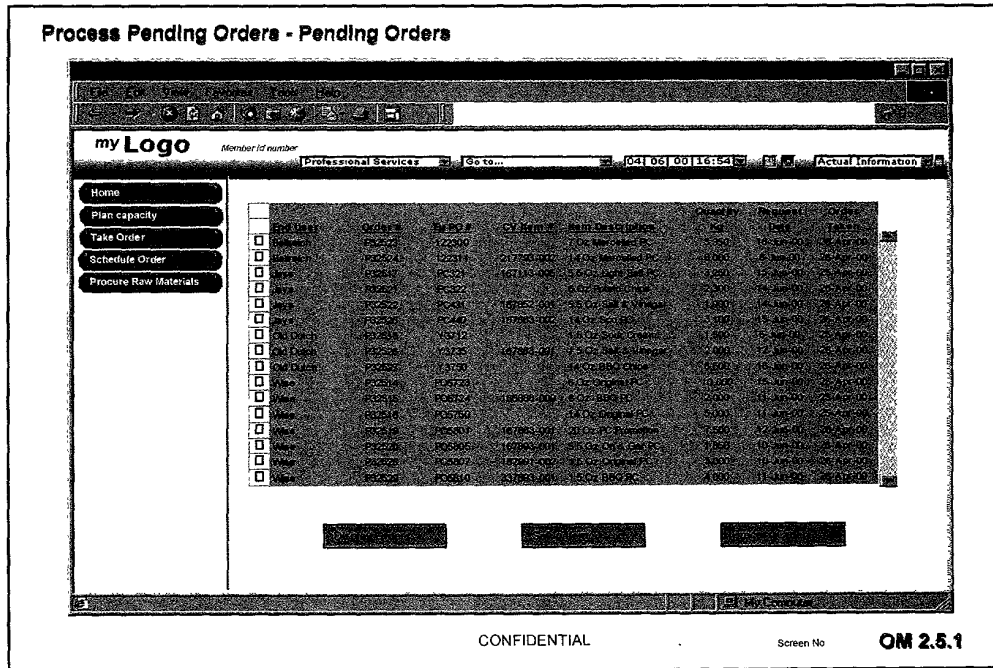
- Process Pending Orders (Process 2.5.1). The first step in processing orders is viewing the list of pending orders. The pending orders may be the result of failed automatic processing, or the result of disabled auto processing. The user may wish to select an order(s) and “View” the order(s) in detail. The next step is to determine if the item definition is complete. This can be determined by looking in column #4 of the Pending Orders que. If this column is blank, then the converter must fill in additional data to complete the item definition by going to Process 2.6.

**Figure 9 (Continued)**  
**Process Pending Orders (Processes 2.5, 2.7)**

- ATP Allocation Check (Process 2.5.2). Both ATP and allocation are checked. If either item fails to pass the check, the system will provide an explanation via a recommended change to the data such that it will pass. For example, if the original order were for 476,000 impressions on July 10<sup>th</sup>, a failure would trigger ePack to display what items could be produced and when (380,000 impressions on July 10<sup>th</sup> or 476,000 impressions on July 15<sup>th</sup>).
- Change / Create Order (Process 2.5.3). If ATP or allocation fails, the converter will have to change the quantity or request date on the order.
- Change / Create Order (Process 2.5.3). If there is a significant change to quantity or request date, the end user may require an additional order be entered to ensure they do not run out of material. The converter will enter the new order.
- Interface To Legacy OMS (Process 2.7). Once an order (s) passes ATP and allocation, it is accepted and passed to the Legacy OMS system.

**Figure 9A**

**Transaction Summary – Order Management, Process Pending Orders (Process 2.5.1)**



- Initial Processing**
- Lookup on the “Orders” database, using converter number, all orders with a “Pending” status
- User Workflow & Resultant Processing**
- Typical
    - The user will check off a group of orders
    - The user will click on the “Process Orders” button
    - List of checked orders and corresponding data will be sent to Transaction 2.5.2 (Check ATP/Allocation)
  - Exception
    - The user will check off a group of orders
    - The user will click on the “Display Orders” button
    - List of checked orders and corresponding data will be sent to Transaction 2.5.3 (Display Order)
  - Exception
    - The user will check off a group of orders that do not have CV Item numbers listed in column #4
    - The user will click on the “Setup Item” button
    - List of checked orders and corresponding data will be sent to Transaction 2.6.1 (Create Item, CV data)
- Notes:**
- No data can be changed on this screen
  - The user may only check off orders and push the setup item or process orders buttons

**Figure 9B**

**Transaction Summary – Order Management, ATP / Allocation Check (Process 2.5.2)**

**Take Order - Check ATP / Alloc**

**my Logo** Member Id number [Professional Services] Go to... [04] [06] [00] [16:54] [PS] [Actual Information]

**Take Order - Check ATP / Alloc**

Order No.: P32514

Order No. P32514 Customer: Wise  
Item No. 167887-001 Description: 6 Oz Regular Potato Chips

Original Request  
Date Requested: 04may00  
Quantity Requested: 475,000 Imps

System Response  
Cylinders: No Film: No ATP: No Alloc: No

	Best Proposal Full Quantity	Alternate Proposal Partial Quantity
Date Requested	10may00	04may00
Quantity Requested	475,000 Imps	394,000 Imps
Impact	+ 6 days	82 %
Pricing	\$3 00 / Kg	\$3 60 / Kg

Accept Accept

CONFIDENTIAL Screen No OM 2.5.2

**Initial Processing**

- Lookup on order DB using order #: date requested, quantity requested, uom requested, enduser number
- Send order data to ATP/Allocation check
- Display ATP / Allocation results

**User Workflow & Resultant Processing**

- Typical
  - User will look at the results of ATP / Allocation, if cylinder or film is red, the user will “click” on the film or cylinder button to get more detail. Display Film Detail – Sch 3.1.4, Display Cylinder Detail – Sch 3.1.3
  - If ATP is “NO” find alternate proposals, see algorithms ATP / Allocation Check.
  - User will look at the “proposed” solutions and accept one of them.
- Exception
  - If any one of the indicators is No (red) the user will click on one of the “display detail” buttons and goto the detail screens.  
Display Film Detail – Sch 3.1.4  
Display Cylinder Detail – Sch 3.1.3  
Display ATP Detail –  
Display Alloc Detail -

**Notes:**

- This screen is only displayed if the order fails for 1 or more of the checks: cylinders, film, ATP, allocation.

**Figure 9C**  
**Transaction Summary – Order Management, Display Order (Process 2.5.3)**

**Display Order**

my Logo Member id number Professional Services Go to... 04/06/00 16:54 Actual Information

Home  
Plan capacity  
Take Order  
Schedule Order  
Procure Raw Materials

**Display Order**

CV Order No. OR516-2345 EU Order No. P32145

**Converter Data**

Order No. OR516-2345  
Item No. 167887-001  
Date Req. 04may00  
Quantity 476,000 Imps  
Quantity 2,557 Kg 63,467 M

**End User Data**

Order No. P32145  
Item No. 99-1632-comv1  
Customer Wise  
6 Oz Regular Potato Chips

	Color	Color #	Ink Sys	Cylinder #	Print	Grav
1		2707	PA	Y2400005		
2		340	PA	Y2400006		
3		405	PA	Y2400123		
4		470	PA	Y2400456		
5		220	PA	Y2400114		
6		1489	PA	Y2400398		
7		3248	PA	Y2400299		
8						
9						
10						

Cylinder Width 1180 mm

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- Initial Processing
- Lookup on Order DB using order #: all order data
  - Display order
- User Workflow & Resultant Processing
- Typical
    - User will look at order details
  - Exception
    - User may click on buttons to look at package structure or bill of material or image details
- Notes:
- This is a read only screen

**Figure 9D**  
**Transaction Summary – Order Management, Change Order (Process 2.5.4)**

Change Order

my Logo

Member Id number

Professional Services

Go to...

04/06/00 11:15:41

Actual Information

Home

Plan capacity

Take Order

Schedule Order

Procure Raw Materials

Change Order

CV

Order No

OR515-2345

EU

Order No

Converter Data

Conv #

225988

Order No

OR515-2345

Item No

187887-001

Date Req

04may00

Quantity

478,000

Imps

Quantity

2,557 Kg

63,467 M

Color

Color #

Ink Sys

Cylinder #

1

2707

IPA

Y2400005

2

1340

IPA

Y2400006

3

1405

IPA

Y2400123

4

1470

IPA

Y2400456

5

1220

IPA

Y2400114

6

11489

IPA

Y2400398

7

13248

IPA

Y2400299

8

9

10

Cylinder Width

1180

mm

End User Data

Order No

P32145

Item No

09-1632-conv1

Customer

Wise

6 Oz Regular Potato Chips

Print

Grav

Process

L3

Bounce

L1

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Screen No

OM 2.5.4

**Initial Processing**

- Lookup on Order DB using order #: all order data
- Display order

**User Workflow & Resultant Processing**

- Typical
  - User will change order quantity or request date
- Exception
  -

**Notes:**

- None

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**Figure 9E**  
**Transaction Summary – Order Management, Create Order (Process 2.5.5)**

myLogo

Member Id number

Professional Services

Go to...

04/05/00 16:54

Actual Information

Home

Plan capacity

Take Order

Schedule Order

Procure Raw Materials

Create Order

CV

Order No OR516-2772 Copy From Order No OR516-2345

Converter Data

Order No OR516-2772

Item No 167887-001

Date Req 30may00

Quantity 238,000 Imps

Quantity 1,279 Kg 31,733 M

End User Data

Order No P32145

Item No 09-1632-conv1

Customer Wise

6 Oz Regular Potato Chips

	Color	Color #	Ink Sys	Cylinder #
1		2707	PA	Y2400005
2		340	PA	Y2400005
3		405	PA	Y2400123
4		470	PA	Y2400456
5		220	PA	Y2400114
6		11488	PA	Y2400396
7		3248	PA	Y2400298
8				
9				
10				

Print Grav

Process L3

Bounce L1

Cylinder Width 1180 mm

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Screen No OM 2.5.5

**Initial Processing**

- Lookup on Order DB using order #: all order data
- Display order

**User Workflow & Resultant Processing**

- Typical
  - User will fill in a new order number and an order number to copy from
  - User will push copy button
  - System will copy order and display copy on screen
  - User will change date requested and quantity
- Exception

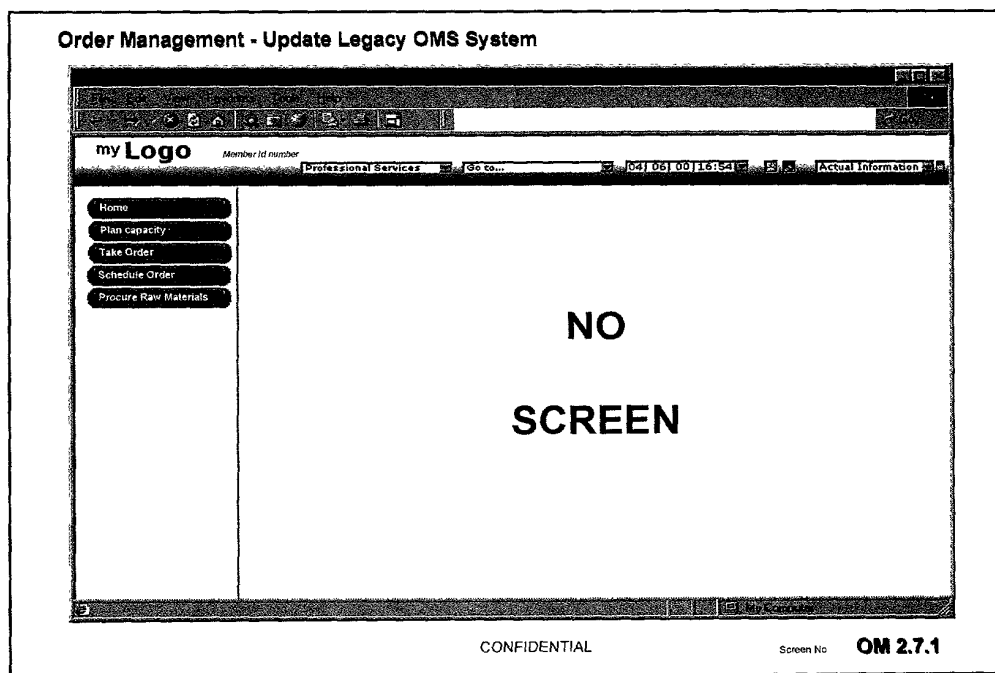
Notes:

None

CONFIDENTIAL - SEC 2.5.5



**Figure 9F**  
**Transaction Summary – Update Legacy OMS System (Process 2.7.1)**



**Initial Processing**

- Send:
  - CV Item #
  - EU Item #
  - End User #
  - End User PO #
  - Quantity requested
  - Quantity unit of measure
  - Date requested
- Return:
  - Order #

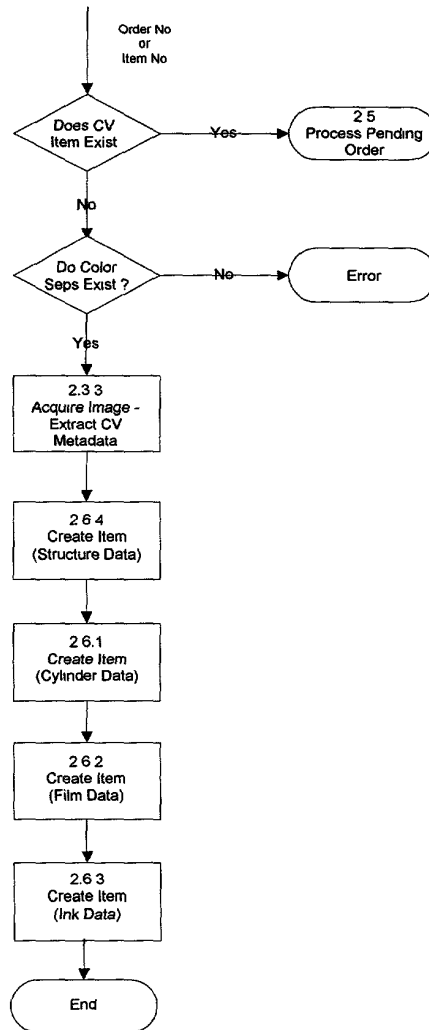
**User Workflow &  
Resultant Processing**

- None

**Notes:**

- None

**Figure 10**  
**Item Setup Converter (CV), Acquire Image and Extract Metadata**  
**(Processes 2.3, 2.6)**

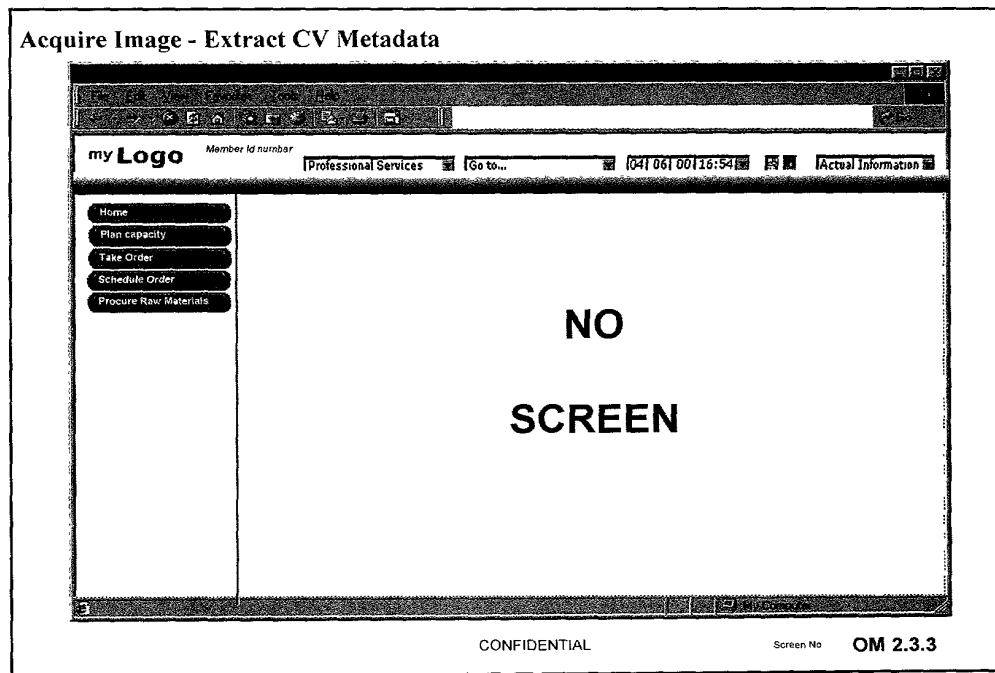


- Acquire Image - Extract CV Metadata (Process 2.3.3). Get Item # from Order DB using order #. Get Image # from Item DB using Item #. Interface with the Image Acquisition and Metadata Extraction Module using Image # and get all converting data.
- Create Item (Process 2.6.4). The converter adds structure data to the item. Some of the data elements for this transaction have already been entered by the end user.

[illegible]

- [illegible]

**Figure 10A**  
**Transaction Summary – Acquire Image - Extract CV Metadata (Process 2.3.3)**



**Initial Processing**

- Send:
  - Image number
- Return:
  - Image description
  - Customer number
  - Customer name
  - # Across
  - # Around
  - Bounce level of difficulty
  - Color # for each cylinder
  - % ink coverage for each cylinder (color)
- Calculations
  - None Required

**User Workflow &  
Resultant Processing**

- None

**Notes:**

- None

### Transaction Summary – Create Item (Structure Data) (Process 2.6.4)

Screen No **OM 2.6.4**

- None

### Transaction Summary – Create Item (Cylinder Data) (Process 2.6.1)

### OM 2.6.1

## User Workflow & Resultant Processing

- ### Typical
- Enter ink system for each cylinder
  - Enter cylinder # for each cylinder
  - On first cylinder, lookup cylinder width on the cylinderDB using convert-no and cylinder number.
  - Fill in cylinder width field
  - For all subsequent cylinders, lookup cylinder width on the cylinderDB using convert-no and cylinder number and check it against the cylinder width field. If there IS NOT a match, error
  - Enter Print
  - Enter process level of difficulty
  - Click on Package Structure button

- None

**Figure 10D**  
**Transaction Summary – Create Item (Film Data) (Process 2.6.2)**

**Item Definition - Bill Of Materials**

---

**my Logo** Member to number Professional Services [Go to...] [04] 06 00 16:54 [Actual Information]

---

**Item Definition - Bill of Materials**

Item  Item No.  Customer Item No.

Item #   
 Customer   
 Description   
 Image #

Bill Of Materials Basis  IMPS

	Material #	Description	Material	Width	Gauge	Qty Req (Kg)
Substrate 1	F-20C-1145	20 Coex	18MM488	1145	20	1521
Substrate 2	F-18M-1140	18 Met		1140	18	1371
Substrate 3						
	Material #	Description	Material	Coating Weight	Coating Units	Qty Req (Kg)
Top Coat						
Lam 1/2	A-1234-Sun	ADH	PU	2.3	g/sq M	182
Lam 2/3						
Bottom Coat						

CONFIDENTIAL Screen No **OM 2.6.2**

**Initial Processing**

- None

**User Workflow & Resultant Processing**

**Typical**

- Enter basis quantity
- Enter basis unit of measure
- If basis unit of measure is not impressions, calculate basis impressions (required for ink calculations)  

$$\text{Kg to Imps} = \text{Kg} * \text{Yield} / (1000^2) / \text{cutoff mm} / \text{width mm}$$

$$\text{Sqm to Imps} = \text{Sqm} / \text{cutoff mm} / \text{width mm} / 1000^2$$

- For all materials
  - Enter material number
  - Lookup on Material DB using material #: material description
  - Enter material, width, gauge, quantity required to produce basis quantity
- For all coatings
  - Enter material number
  - Lookup on Material DB using material #: material description
  - Enter material, coating weight, coating units, quantity required to produce basis quantity
- Click on Ink Bill of Materials button

**Notes:**

- None

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**Figure 10E**  
**Transaction Summary – Create Item (Ink Data) (Process 2.6.3)**

**Item Definition - Ink Bill Of Materials**

---

**my Logo**    Member Id number    Professional Services    Go to...    04/06/00 16:54    Actual Information

---

**Item Definition - Bill of Materials**

Item 167887-001    Item No. 167887-001    Customer 12345-1000    Item No. 12345-1000

Item # 167887-001

Customer Wise

Description 6 Oz Regular Potato Chips

Image # 19902-54976v1

Color	#	Material #	Ctg Wght g/M <sup>2</sup>	% Cover	% Solids	Quantity Kg
	2707	I1234-abm	1.16	30%	45%	11.90
	340	I3245-Zen	0.95	45%	55%	17.90
	405	I222-mor	0.85	50%	65%	21.00
	470	I444-asb	1	10%	50%	3.80
	220	I333-l	1.05	15%	45%	5.38
	1489	I1111-unb	0.75	40%	49%	11.17
	3248	I8876-ik	0.8	5%	57%	1.95

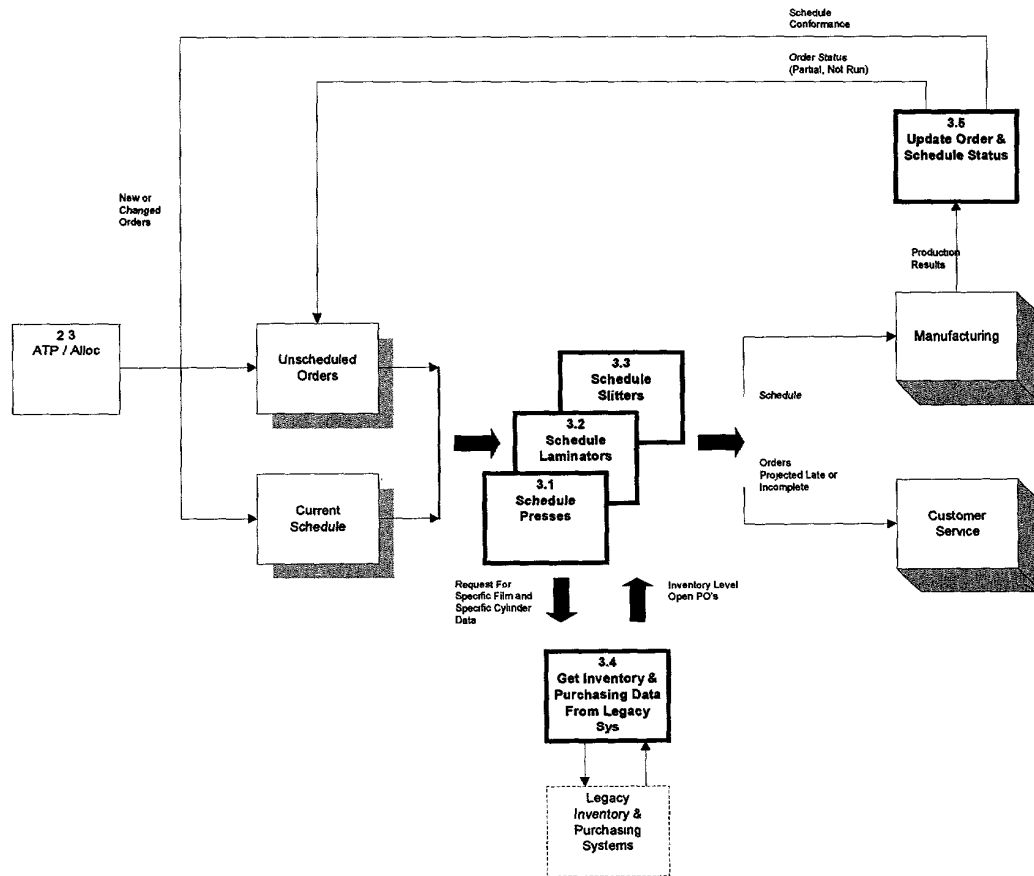
CONFIDENTIAL    Screen No    **OM 2.6.3**

- Initial Processing    • None
- User Workflow & Resultant Processing    • Typical
- For all materials
    - Enter material number
    - Enter coating weight
    - Enter % solids
  - Calculate Quantity = (BasisImpressions \* cutoff \* width /1000/1000) \* coating weight \* % coverage \* % solids/1000
- Notes:    • None

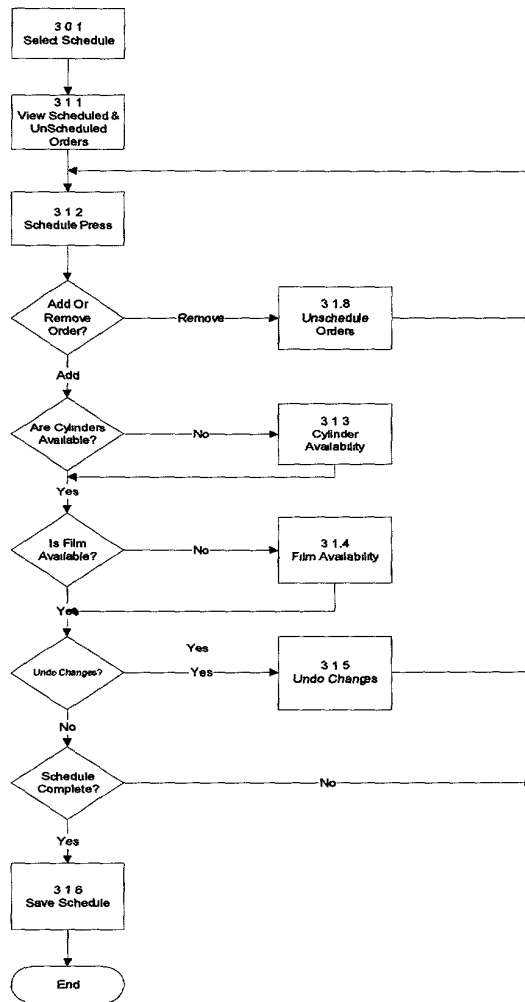


**Figure 11**

**Schedule Orders Functional Overview**



**Figure 11A**  
**Schedule Press (Process 3.1)**



- Select a Schedule (Process 3.0.1). Gives the user the ability to select the schedule they would like to work on. A user may have several “versions” of a schedule.
- View Scheduled & Unscheduled Orders (Process 3.1.1). Gives the user split screen capability (of the schedule they have selected) to view a line schedule on one side and a specified group of unscheduled orders on the other side of the screen.

[illegible]

- **Schedule Press (Process 3.1.2).** Gives the user the ability to schedule a press by selecting the job to schedule and dragging it onto the schedule in the desired position. The schedule is automatically adjusted. Scheduling statistics and job indicator lights are provided to help the user assess the impact of the change.
- **Cylinder Availability (Process 3.1.3).** When a job is scheduled there is an instantaneous check on available print cylinders. If any of the cylinders are not going to be ready then this transaction will show the user the status and projected complete dates on the cylinders.
- **Film Availability (Process 3.1.4).** When a job is scheduled there is an instantaneous check on film availability. If film is not going to be ready then this transaction will show the user a view of film inventory. The user can do a query on film sizes that are close to the desired size and may elect to “use” some of film for this job.

**Figure 11B**  
**Transaction Summary – Select Schedule (Process 3.0.1)**

**Schedule Order - Schedule Versions**

myLogo Member id number Professional Services Go to... 04/06/00 15:54 Actual Information

Home  
Plan capacity  
Take Order  
Schedule Order  
Procure Raw Materials

Schedule Versions

Process Step

Schedule Version	Date	Comment
A	8/15/200	Active Schedule
V1	8/15/2000	Extra Jayes Orders
V2	8/15/2000	Extra Jayes Orders + Volume Split
V3	8/15/2000	No Extra Orders
V4		
V5		

Get Schedule Print Schedule Cancel Back

CONFIDENTIAL, DO NOT DUPLICATE Screen No SCH 3.0.1

**Initial Processing**

- Default process step to printing
- Lookup and display existing schedule version data on the schedule-version db using converter-no and process step

**User Workflow & Resultant Processing**

- Typical
  - Change process step
  - Lookup and display existing schedule version data on the schedule-version db using converter-no and process step
  - Click and highlight desired version
  - Click on the Get Schedule button

*To build version PVX (Print version X) scheduled orders for line L for the next screen*

- Join Order DB and ScheduleDB (only records where schedule DB records exist)
- Select all orders with printstatus (OrderDB) = "unscheduled"
- Select all orders with schedule line (ScheduleDB) = "L" (default to lowest line number to build first tab on next screen)
- Select all orders with version (ScheduleDB) = "X"
- Sort orders on sequence #
- Get PVX start date and time from the schedule-timeDB using process-step = "Print", Version = "X", and Line-no = "L"
- Starting with first order (in sorted sequence) and continuing through the list, calculate start time, run time, and changeover time
- Build "Schedule PVX" pane for the default line, this will be the first display pane on the next screen.
- Build the other scheduled line panes in the background.

## Figure 11B (Continued)

### Transaction Summary – Select Schedule (Process 3.0.1)

#### User Workflow & Resultant Processing

To build version PVX (Print version X) unscheduled orders for the next screen

- Join order DB and schedule DB (using all order records)
- Select all orders with Print-Status = "Unscheduled"
- Select all orders with Version NOT= "X" (these should be all of the unscheduled orders for version X)
- Sort the unscheduled orders based on capacity group, on customer on item description.
- Default capacity group to the first alphabetical group and select those orders. Build the unscheduled PVX pane for that capacity group. This will be starting display pane for the unscheduled orders on the next screen.
- Build the other unscheduled capacity group panes in the background.

#### • Exceptional

Delete schedule button – The user highlights a schedule and presses the delete schedule button. Note: You are not allowed to delete the active schedule. If you want to get rid of the active schedule, you must pull it up (get schedule) and unschedule the orders.

- Get the ScheduleDB and get all of the records with schedule version = "X" (the version to delete).
- Delete these records

Update production button – The user presses the update schedule button.

- Join the ScheduleDB and the OrdersDB
- Select all records with Scheduleversion = "A"
- Build the display for transaction UP 1.0.1

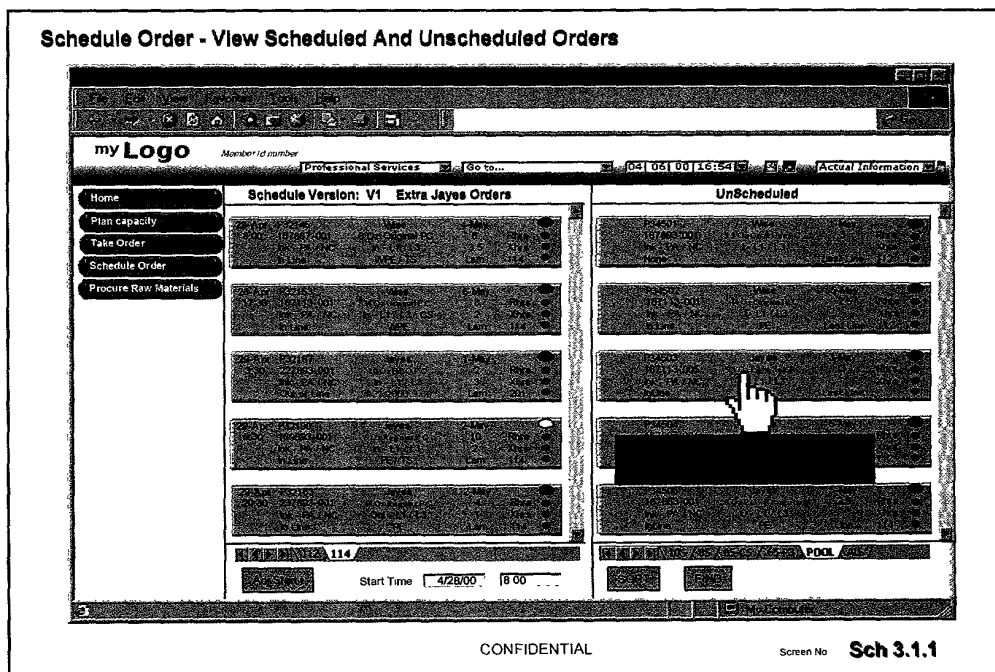
Merge with Actual Schedule button – The user highlights a schedule and presses the merge with actual schedule button.

- Join the OrderDB and ScheduleDB (only records where ScheduleDB records exists).
- Select all records with version = "A" or version = "X"
- Sort on Line number on version on sequence number (this should segment by line, putting all active schedule jobs first, then VX jobs).
- For each line number, renumber sequence from 1 to N.

Figure 11B (Continued)

**Figure 11C**

**Transaction Summary – Schedule Press, View Schedule (Process 3.1.1)**



**Initial Processing**

- See transaction SCH 3.0.1 for details on how to build the “tab panes” for this screen.
- Get start date and start time from the schedule-timeDB process-step = “Print”, Version = “X”, and Line-no = “L”

**User Workflow & Resultant Processing**

- Typical
  - Go to scheduled portion of the screen and click on the tab for the line # to be scheduled
  - Go to the unscheduled portion of the screen and click on the tab for the group of orders to be used as candidates for scheduling (this may be a capacity group, the pool, or all orders)
  - Scroll through both sections of the screen and find order to be scheduled and the location for it.
  - Click on the order to be scheduled
  - Transfer control to transaction Sch 3.1.2 passing line number for scheduled orders and line number and order number for unscheduled orders.
- Exceptional
  - Adj Start t button – The user will change the displayed start date and start time and click on the Adj Start t button.
  - Save the new start date and start time in the schedule time DB using process step, schedule V# and line-no.
  - Starting with first order (in sorted sequence) and continuing through the list, calculate new start times.
    - New start time = start time from last job + run time from last job + changeover time to this job.

**Figure 11C (Continued)**

**Transaction Summary – Schedule Press, View Schedule (Process 3.1.1)**

**User Workflow & Resultant Processing**

- Sort button – The user will click on the sort button.
  - Bring up a sort menu with all of the order characteristics. Allow the

user to pick "sort on" criteria and hit OK. Resort the unscheduled orders based on the sort criteria.

Find button – User will click on the find button

- Bring up a find dialog box so the user can key in an order number. Search the unscheduled list and adjust the display to show the "find" order in the middle of the unscheduled window.

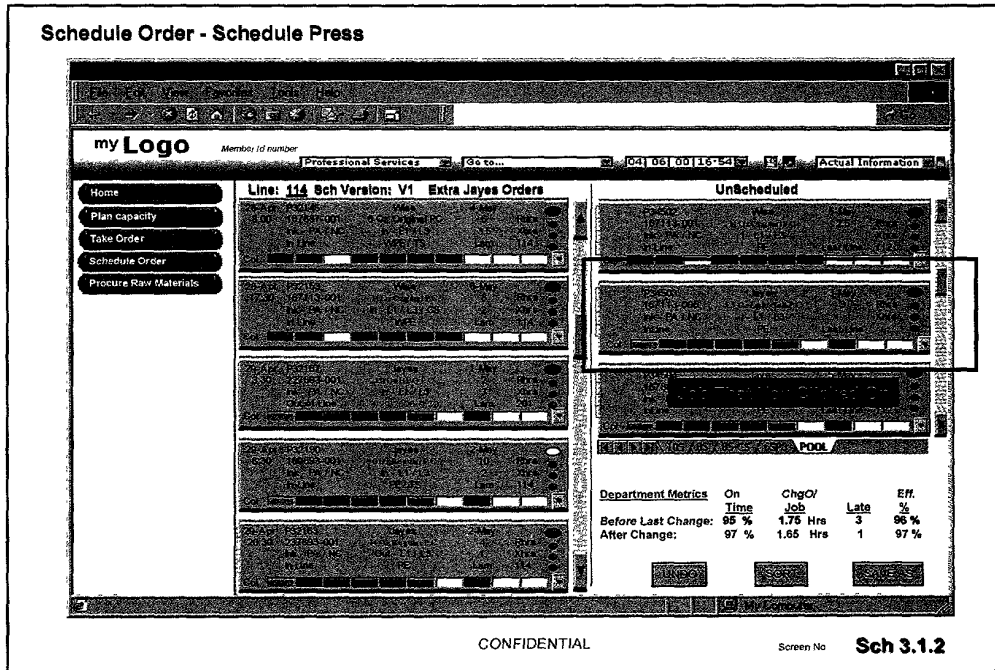
#### Notes

- Initial processing for this screen should be done on transaction SCH 3.0.1. For performance reasons, it may make sense to build the default tabs in transaction SCH 3.0.1 and then build the subsequent tabs in the background.

FOR THE "SHE2550"

**Figure 11D**

**Transaction Summary – Schedule Press, View Schedule (Process 3.1.2)**



**Initial Processing**

- Use the datasets created in SCH3.1.1.
- Build the job bars using DB information from the orders DB.
- Indicator lights
  - Top light – Ontime light
  - = green if xworks date – ship date > 2,
  - = yellow if xworks ship date – xworks-date <= 2
  - = red if xworkds ship date – xworkds-date < 0
  - Next light – Film light
  - = green if film exists
  - = yellow if film arrives on production day
  - = red if no film
  - Next light – Cylinder
  - = green if cylinders exists
  - = yellow if cylinders arrives on production day
  - = red if no cylinders by production day
  - Next light – Next Step light
  - = green if xworks date for next step > this step
  - = yellow if xworks date for next step = this step
  - = red if xworks step for next step < this step

**User Workflow & Resultant Processing**

- Typical
  - User will scroll through the scheduled orders and look for a good position to schedule the order they are interested in
  - User will go to the unscheduled portion of the screen and click on the order they want to schedule.

**Figure 11D (Continued)**

**Transaction Summary – Schedule Press, View Schedule (Process 3.1.2)**



User Workflow &  
Resultant Processing

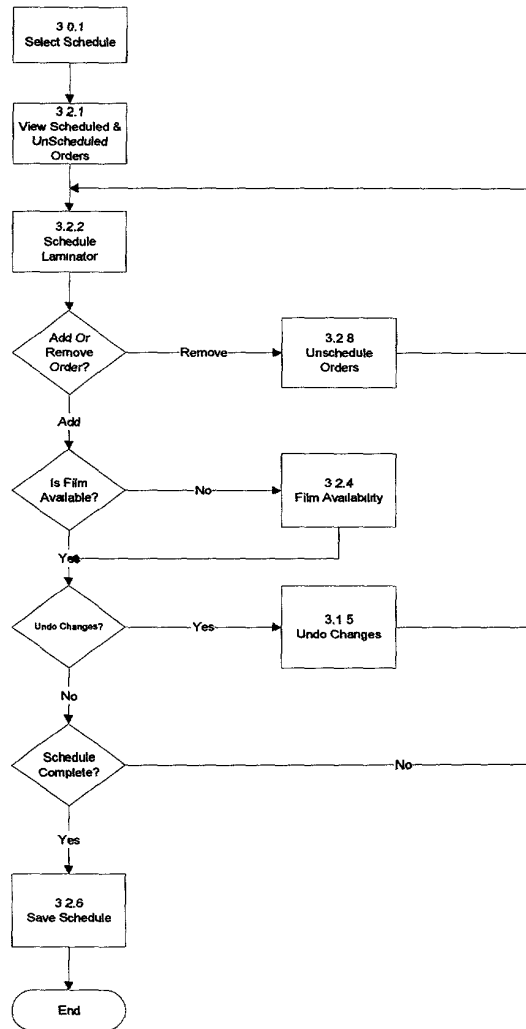
- Typical (continued)
  - User will drag the order to the position on the scheduled portion of the screen that they want to schedule the order
  - Execute Alg Schedule Order
  - User will review the department metrics and schedule indicator lights
- Exceptional
  - Undo button – The user clicks on the “undo” button.
    - Remove (undo) the last order scheduled
    - Recalculate the changeover times
    - Recalculate the start times
    - Recalculate the department metrics
  - Sort button – The user will click on the sort button.
    - Bring up a sort menu with all of the order characteristics. Allow the user to pick “sort on” criteria and hit OK. Resort the unscheduled orders based on the sort criteria.
  - Save As button – The user will click on the Save As button.
    - Bring up a file save dialog box and allow the user to save the schedule as V1, V2, V3, V4, V5. If one of those already exists, ask the user if they want to overwrite it.
    - Take all of the scheduled orders and goto the scheduleDB and change the Version column to the Save as X version. For example, the user may have originally done a “get schedule” on version V1, made some changes and decided to save as V2.

Notes

- None

THE SCHEDULE

**Figure 11E**  
**Schedule Laminator (Process 3.2)**

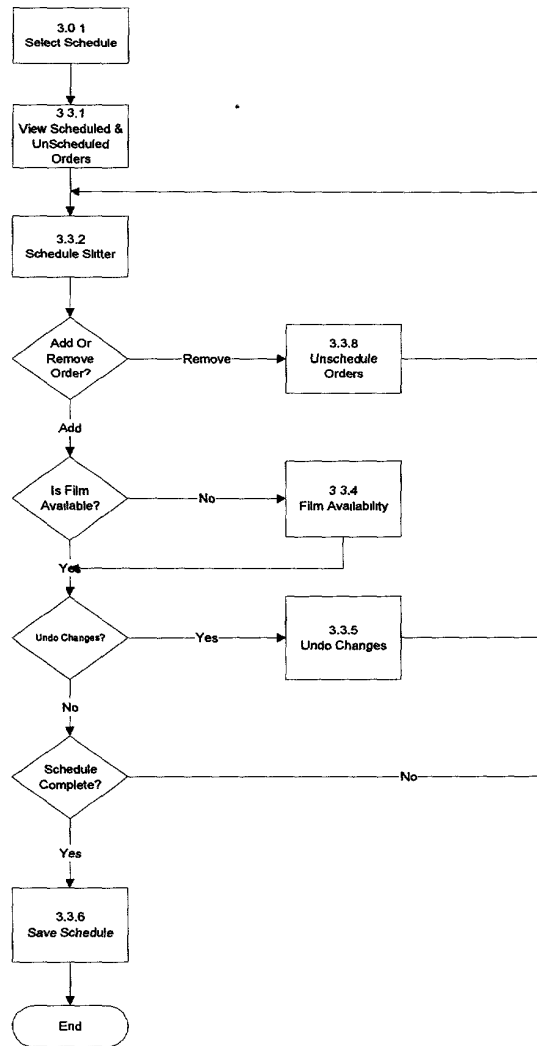


- Select a Schedule (Process 3.0.1). Gives the user the ability to select the schedule they would like to work on. A user may have several “versions” of a schedule.
- View Scheduled & Unscheduled Orders (Process 3.2.1). Gives the user split screen capability (of the schedule they have selected) to view a line schedule on one side and a specified group of unscheduled orders on the other side of the screen.

**Figure 11E (Continued)**  
**Schedule Laminator (Process 3.2)**

- Schedule Laminator (Process 3.2.2). Gives the user the ability to schedule a laminator by selecting the job to schedule and dragging it onto the schedule in the desired position. The schedule is automatically adjusted. Scheduling statistics and job indicator lights are provided to help the user assess the impact of the change.
- Film Availability (Process 3.2.4). When a job is scheduled there is an instantaneous check on film availability. If film is not going to be ready then this transaction will show the user a view of film inventory. The user can do a query on film sizes that are close to the desired size and may elect to "use" some of film for this job.

**Figure 11F**  
**Schedule Slitter (Process 3.3)**

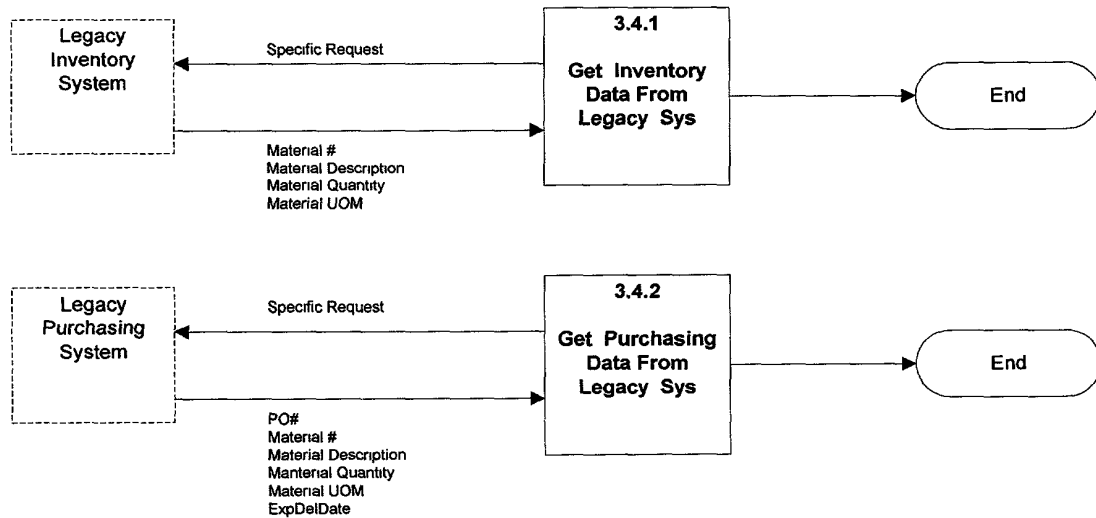


- Select a Schedule (Process 3.0.1). Gives the user the ability to select the schedule they would like to work on. A user may have several “versions” of a schedule.
- View Scheduled & Unscheduled Orders (Process 3.3.1). Gives the user split screen capability to select a line schedule on one side and a specified group of unscheduled orders on the other side of the screen.

[illegible]

- \_\_\_\_\_

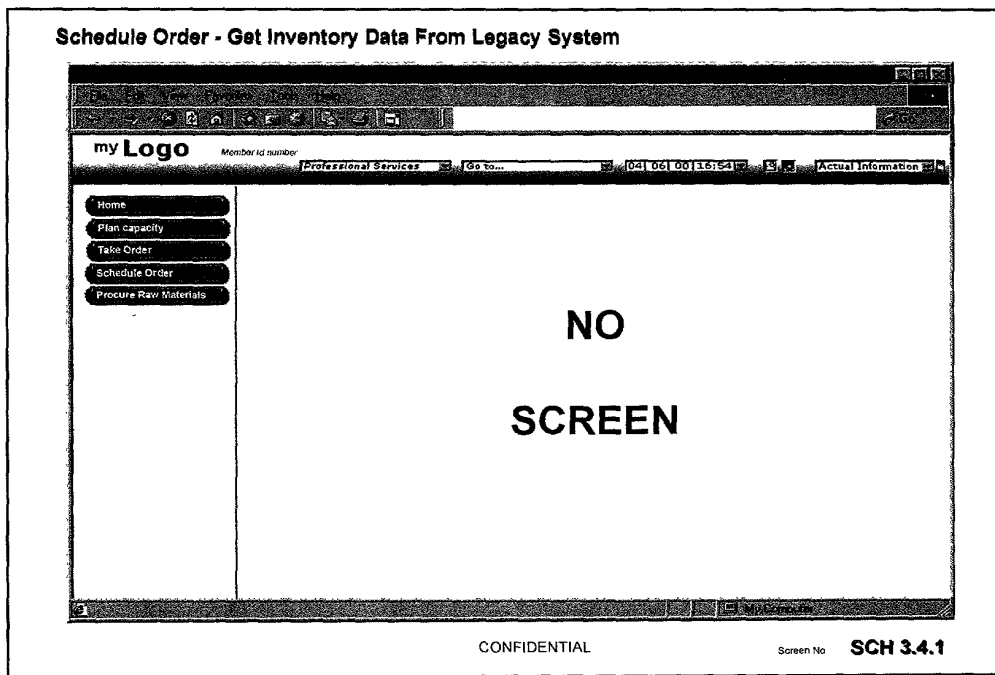
**Figure 11G**  
**Inventory / Purchasing Interface (Process 3.4.1 & 3.4.2)**



- Get Inventory Data From Legacy System (Process 3.4.1). As orders are scheduled, inventory data on the required film and cylinders is retrieved from the legacy system. This data is used for raw material availability checking.
- Get Purchasing Data From Legacy System (Process 3.4.2). As orders are scheduled, purchasing data on the required film and cylinders is retrieved from the legacy system. This data is used for raw material availability checking.

**Figure 11H**

**Transaction Summary – Get Inventory Data From Legacy System (Process 3.4.1)**



**Initial Processing**

- Receive order number and item number from SCH 3.1.2
- Get Bill of Material (BOM) items from BOM DB using Item number
- For each BOM item with class = "Film", send request to inventory legacy system
- Store returned inventory values
- For each BOM item with class = "Cylinder", send request to inventory legacy system
- Store returned inventory values

**User Workflow & Resultant Processing**

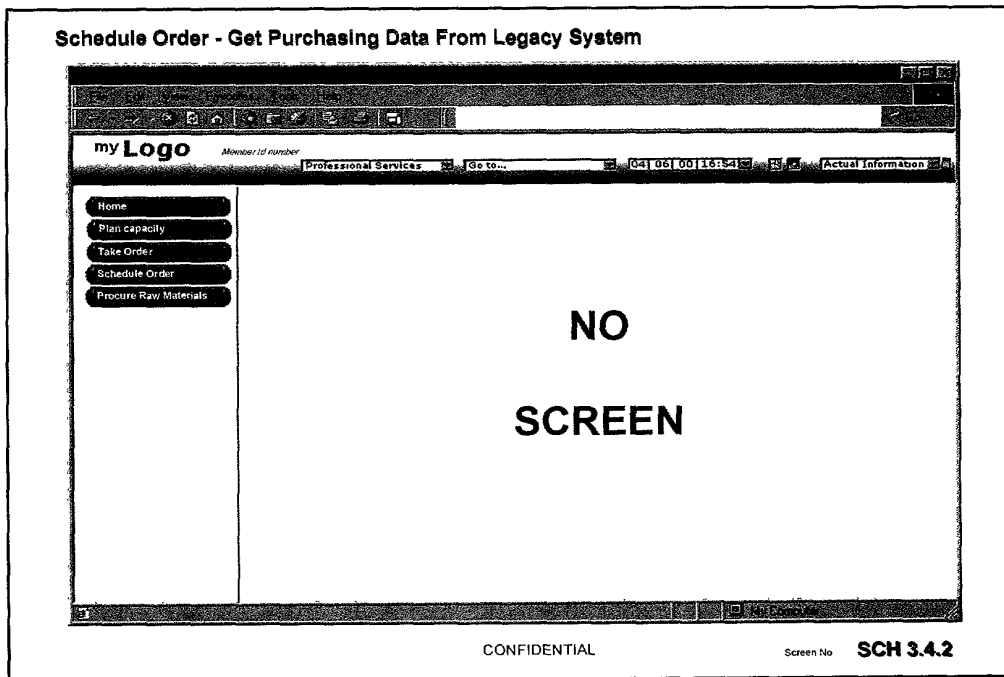
- Typical

**Notes**

- None

**Figure 11I**

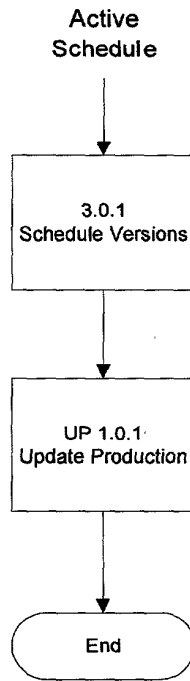
**Transaction Summary – Get Purchasing Data From Legacy System (Process 3.4.2)**



- |                                      |   |
|--------------------------------------|---|
| Initial Processing                   | <ul style="list-style-type: none"><li>• Receive order number and item number from SCH 3.1.2</li><li>• Get BOM items from Bom DB using Item number</li><li>• For each BOM item with class = "Film", send request to purchasing legacy system</li><li>• Store returned purchasing values</li><li>• For each BOM item with class = "Cylinder", send request to purchasing legacy system</li><li>• Store returned purchasing values</li></ul> |
| User Workflow & Resultant Processing | <ul style="list-style-type: none"><li>• Typical</li></ul>   |
| Notes                                | <ul style="list-style-type: none"><li>• None</li></ul>  |



**Figure 11J**  
**Update Order And Schedule Status (Process 3.5)**



- Schedule Versions (Process 3.0.1). The update production screen is accessed from the schedule versions screen. You may only update the active schedule from this screen. From the screen, push the "Update Production" button.
- Update Production (Process UP1.0.1) From this screen, the user can update the schedule and readjust the start time of the active job.

**Figure 11K**  
**Transaction Summary – Schedule Versions (Process 3.5.1)**

**Schedule Order - Schedule Versions**

**myLogo** Member id number

Professional Services Go to...

04/06/00 16:54

Actual Information

Home

Plan capacity

Take Order

Schedule Order

Procure Raw Materials

**Schedule Versions**

Process Step Printing

Schedule Version	Date	Comment
A	8/15/2000	Active Schedule
V1	8/15/2000	Extra Jayes Orders
V2	8/15/2000	Extra Jayes Orders + Volume Split
V3	8/15/2000	No Extra Orders
V4		
V5		

Update Production

CONFIDENTIAL, DO NOT DUPLICATE

Screen No **SCH 3.0.1**

- Initial Processing**
- Default process step to printing
  - Lookup and display existing schedule version data on the schedule-version db using converter-no and process step.
- User Workflow & Resultant Processing**
- Typical
    - User will click on the “Update Production” button
    - System will lookup the Active schedule on the schedule DB and transfer control to UP1.0.1 Update Production.
- Notes**
- None

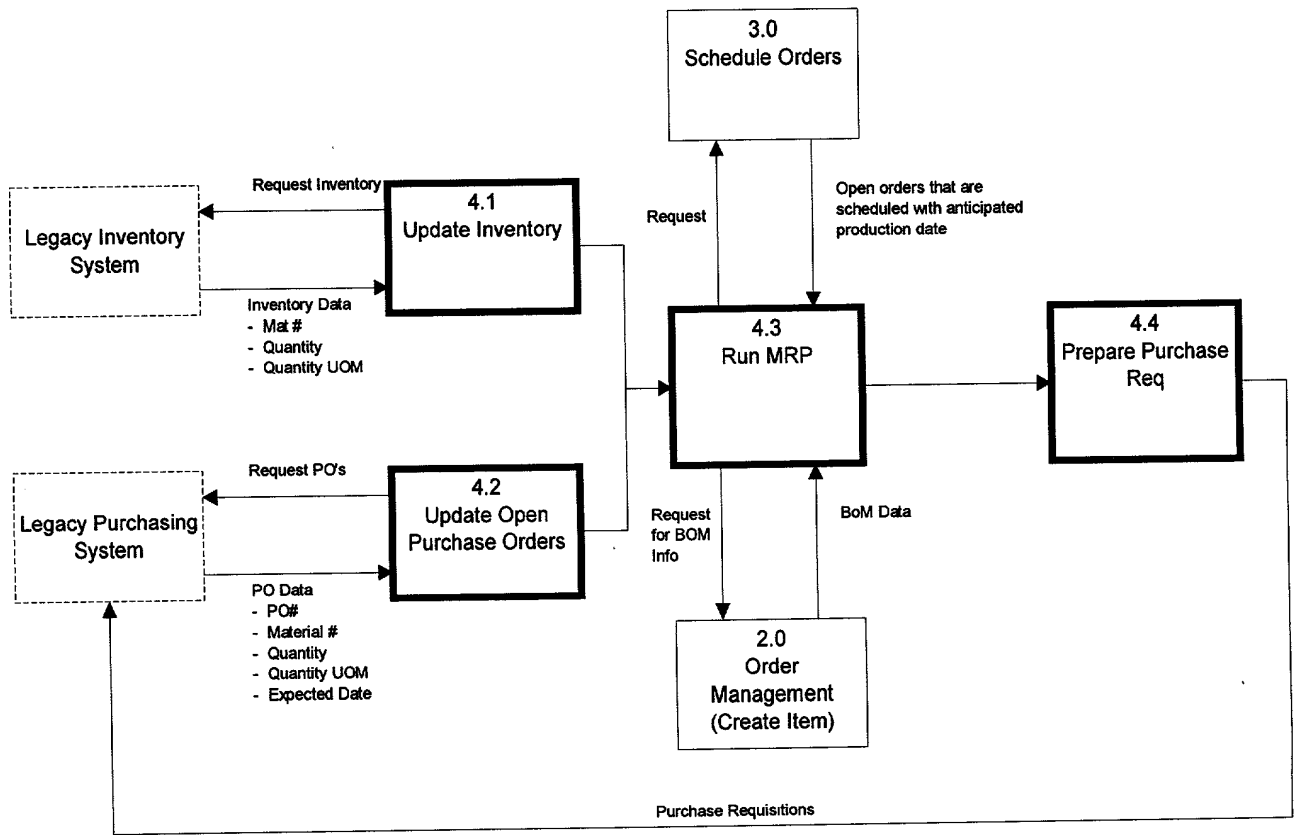
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2
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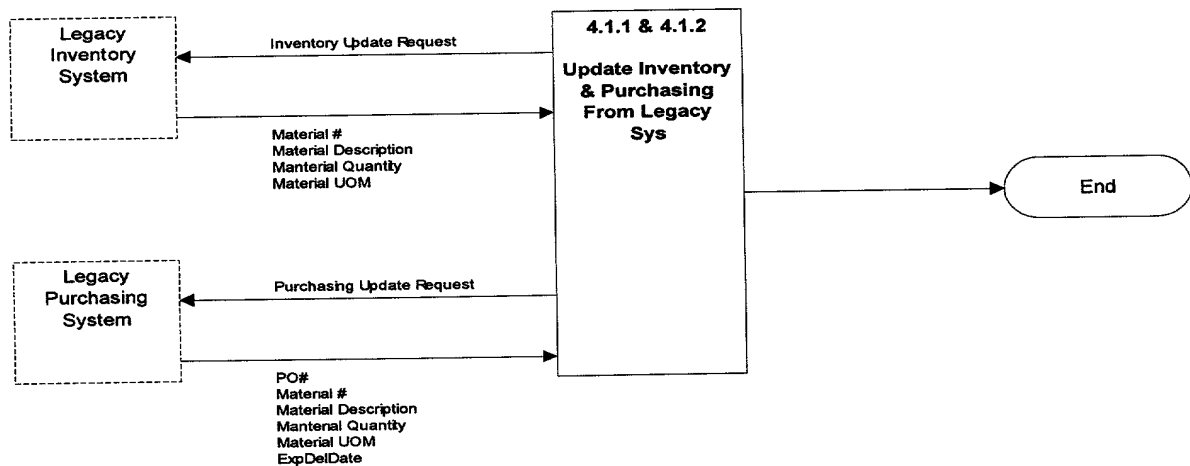
- |                                      |  |
|--------------------------------------|--|
| Initial Processing                   | <ul style="list-style-type: none"> <li>• Display input screen with first six fields filled in from the active schedule.</li> </ul>   |
| User Workflow & Resultant Processing | <ul style="list-style-type: none"> <li>• Typical           <ul style="list-style-type: none"> <li>– User will fill in the Status, Prod Q, Cy, Film, and Reason columns for all pertinent orders. See glossary section for a list of acceptable codes.</li> <li>– User will mark the active job in the status column with an “A” and put the actual start date and start time below in the Active Job section of the screen.</li> <li>– The system will resort and recalculate the start times for all of the active jobs left on the schedule.</li> </ul> </li> <li>• Exceptional           <ul style="list-style-type: none"> <li>– User will highlight a row (order) and click on the “Split Order” button.</li> <li>– The system will split the order into two orders with a suffix of –A and –B.</li> <li>– The user will fill in the pertinent data columns for the split job.</li> </ul> </li> </ul> |
| Notes                                | <ul style="list-style-type: none"> <li>• None</li> </ul>   |

**Figure 12**

**Material Requirements Planning Functional Overview**



	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2
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- **Update Inventory & Purchasing From Legacy System (Processes 4.1.1 & 4.1.2).** At the beginning of the MRP process it is critical to have an inventory load and PO load from the Legacy systems. Prior to the loading inventory and PO's will be cleared such that the Legacy load is a complete reload of data. This approach eliminates the problem of keeping 2 systems in synch. The legacy system is the master system and the present invention simply accepts the inventory and PO loads it is given.

The load is initiated via transactions 4.1.1 and 4.1.2, which request data from the Legacy system.

### Inventory Request (4.1.1)

**Legacy returns - For all raw materials**

Material #, material description, material quantity and material unit of measure

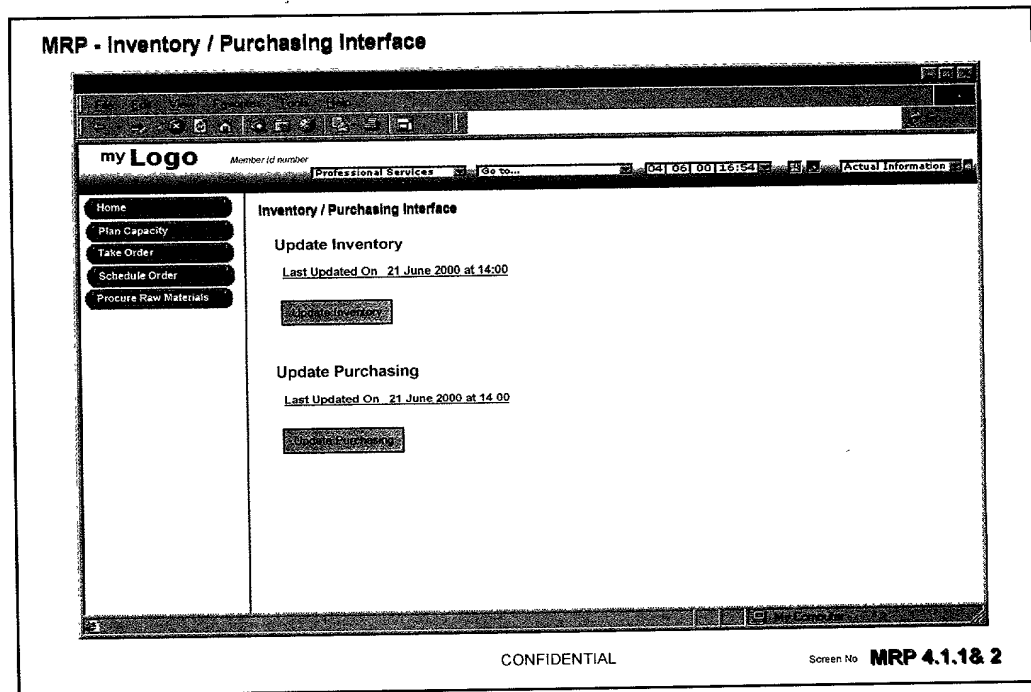
### Purchasing Request (4.1.2)

**Legacy returns – For all raw materials**

Legacy returns – For all raw materials  
PO#, material #, material description, material quantity, material unit  
of measure, and the expected delivery date

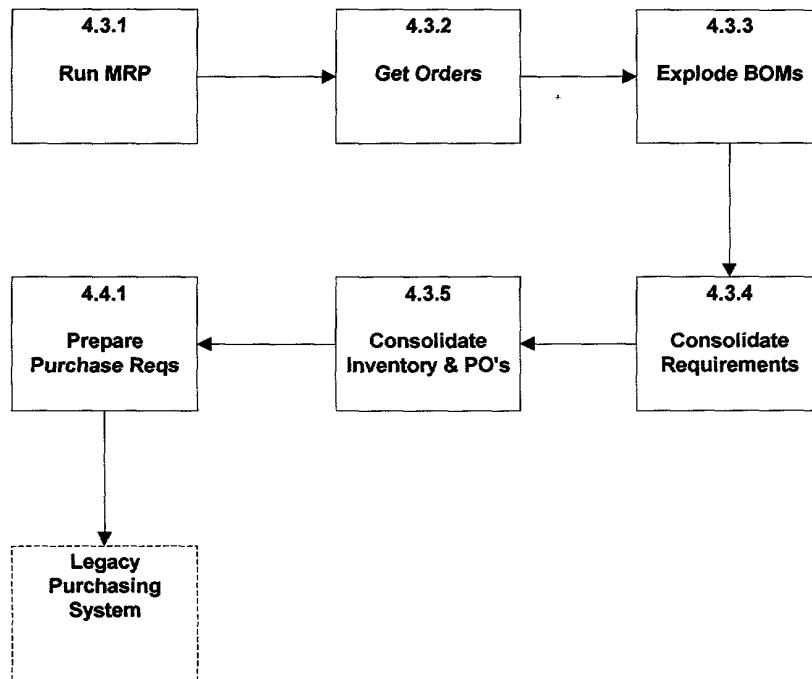
The material numbers in the bills of material should be identical to the material numbers being used in the legacy system.

**Figure 12B**  
**Update Inventory & Purchasing From Legacy System (Process 4.1.1 & 4.1.2)**



- |                                      |  |
|--------------------------------------|--|
| Initial Processing                   | <ul style="list-style-type: none"> <li>• Lookup date and time of previous download on Download DB</li> </ul>   |
| User Workflow & Resultant Processing | <ul style="list-style-type: none"> <li>• Typical           <ul style="list-style-type: none"> <li>– User will click on Update Inventory</li> <li>– User will click on Update Purchasing</li> </ul> </li> </ul> |
| Notes                                | <ul style="list-style-type: none"> <li>• None</li> </ul>   |

**Figure 12C**  
**Run MRP, Prepare Purchase Requirements (Process 4.3, 4.4)**



- Run MRP (Process 4.3.1 - 4.4.1) MRP uses both scheduled and unscheduled orders to determine requirements. The Bills of Materials (BOMs) for these orders are exploded to create a list of requirements. This list is then consolidated by material by day. Once this is done, inventory and PO's are consolidated into a list by material by day of inventory. The two lists are compared to generate an overall purchase requisition list.

**Figure 12D**  
**Transaction Summary – Run MRP (Process 4.3.1)**

The screenshot shows a web application titled "Procure Raw Materials - Run MRP : Choose Parameters". On the left is a navigation menu with buttons: Home, Plan Capacity, Take Order, Schedule Order, and Procure Raw Materials. The main area contains a form with the following elements:

- Period:** Two sets of input fields for "From" and "To". Each set includes a date field (dd/mm/yy) and a "Week No" field. There is an "OR" option between the two sets.
- Materials:** A section with a "Materials:" label and a radio button for "All". To the right is a list of material classes with checkboxes: OPP Film, OPET Film, PP Film, CPP Film, Paper, Foil, Other Substrates, Resin, Adhesive, Ink, Raw Materials, and Engraving.
- Run MRP:** A button at the bottom left of the main form area.

At the bottom of the application window, it says "CONFIDENTIAL" and "Screen No MRP 4.3.1".

- |                                      |  |
|--------------------------------------|--|
| Initial Processing                   | <ul style="list-style-type: none"> <li>• Lookup the current week number on CalenderDB</li> <li>• Default "From" to the current week and "To" to current week + 3</li> </ul>  |
| User Workflow & Resultant Processing | <ul style="list-style-type: none"> <li>• Typical           <ul style="list-style-type: none"> <li>– User will edit the from and to weeks or dates</li> <li>– User will check off the materials that they would like to run MRP for</li> <li>– User will click on the "Run MRP" button</li> <li>– If user has filled in weeks, calculate the "from" and "to" dates using "from" and "to" weeks</li> <li>– Get all orders on the Orders DB that have date-xworks-print or date-xworks-lam between these two dates</li> <li>– For all of these orders, get all material #'s in the BOM by doing a lookup on BOM DB using Item #</li> <li>– Select only those materials where MaterialClass = one of the selected classes from the MRP screen</li> <li>– For each material, calculate a required order quantity</li> <li>– If BOM item UOM ≠ BOM basis UOM then convert BOM basis UOM<br/>               Imps to kg = <math>IMPs * (width * cutoff) / 1000 / 1000 / yield</math><br/>               Kg to Imps = <math>KG * yield * 1000 * 1000 / (width * cutoff)</math></li> <li>– Required Order Quantity = <math>(Gross Order Quantity / BOM Basis quantity) * item bom quantity</math></li> <li>– Sort all bom items, for all selected orders on item number and on date required, subtotal on required order quantity (by date)</li> <li>– For each item calculate an on hand quantity = Inventory – sum of all item quantities from earlier dates</li> <li>– For each item calculate an on order quantity = sum of all item po's from earlier dates, up to the "to" date</li> </ul> </li> </ul> |

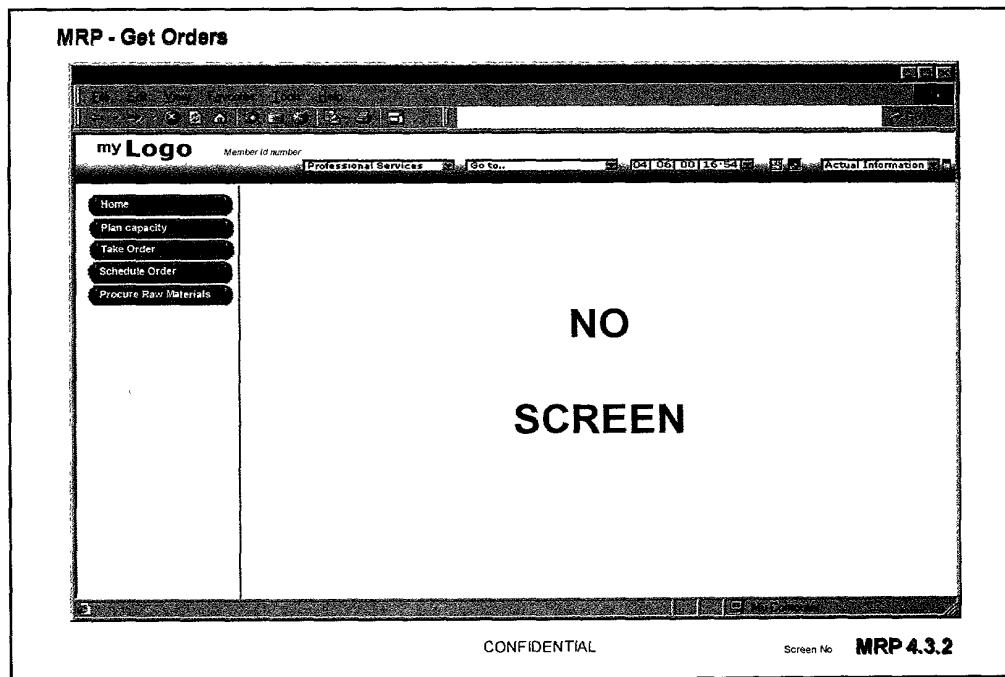


### Transaction Summary – Run MRP (Process 4.3.1)

## Notes

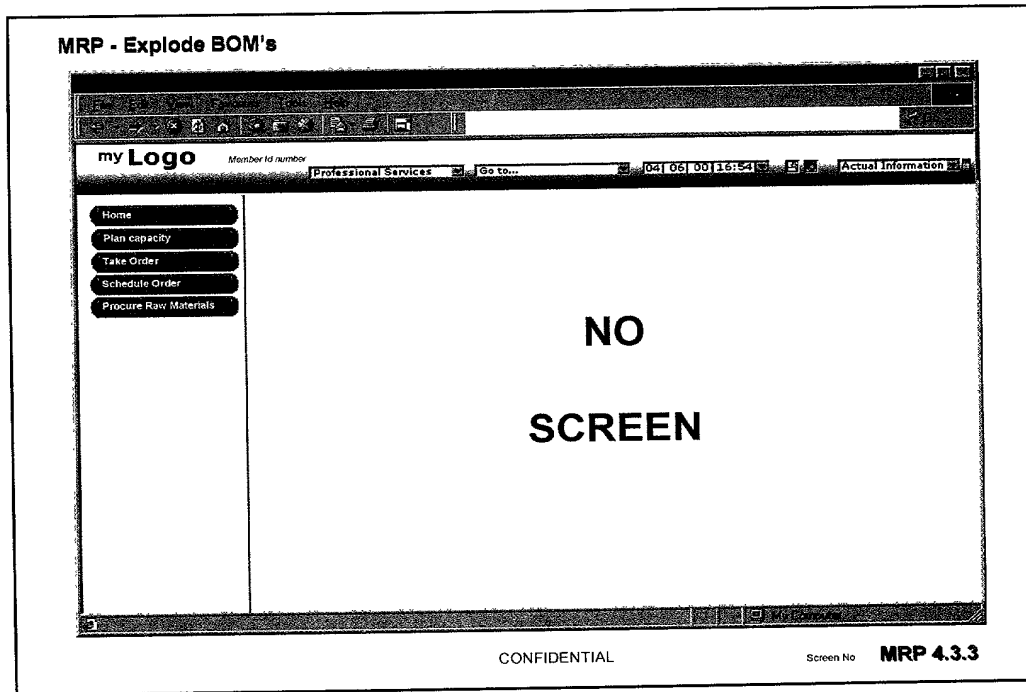
- None

**Figure 12E**  
**Transaction Summary – Get Orders (Process 4.3.2)**



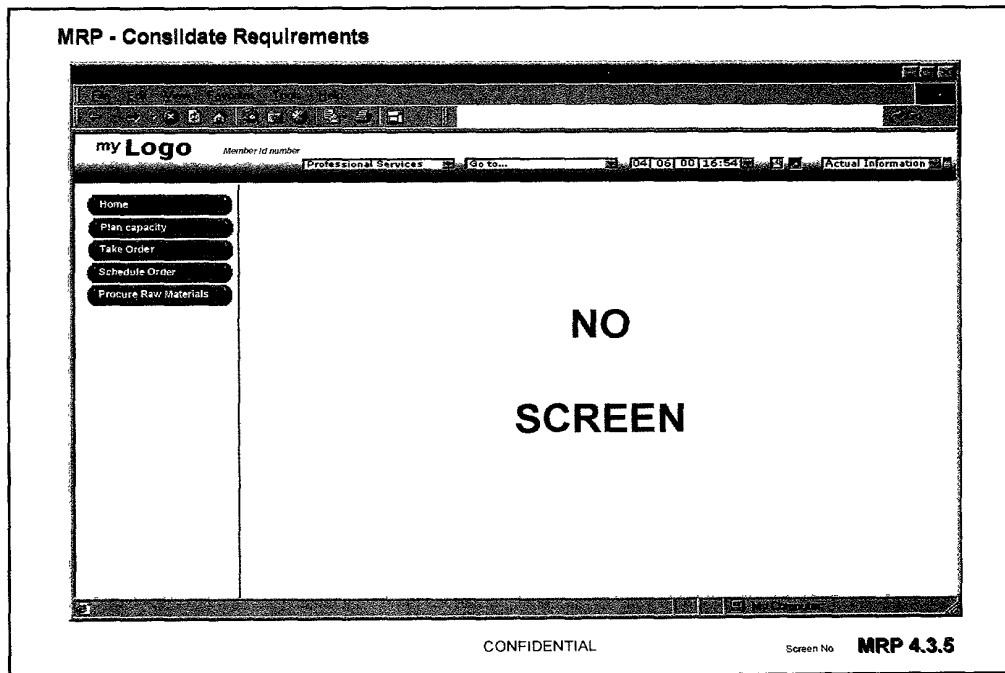
- |                                      |   |
|--------------------------------------|---|
| Initial Processing                   | <ul style="list-style-type: none"><li>• Receive “from” and “to” weeks from MRP transaction</li><li>• Calculate from and to dates</li><li>• Get all orders on the Orders DB that have Xworks dates between these two dates</li></ul> |
| User Workflow & Resultant Processing | <ul style="list-style-type: none"><li>• Typical</li></ul>   |
| Notes                                | <ul style="list-style-type: none"><li>• None</li></ul>  |

**Figure 12 F**  
**Transaction Summary – Explode BOM's (Process 4.3.3)**



- |                                      |  |
|--------------------------------------|--|
| Initial Processing                   | <ul style="list-style-type: none"> <li>• For each of the orders in 4.3.2 <ul style="list-style-type: none"> <li>• Get list of bom items by doing a lookup on BOM db using Item #</li> <li>• For each item calculate a required quantity</li> </ul> </li> </ul> <p>Required Quantity = (Gross Order Quantity/Bom Basis Q)*Item BOM Quantity</p> |
| User Workflow & Resultant Processing | <ul style="list-style-type: none"> <li>• Typical</li> </ul>  |
| Notes                                | <ul style="list-style-type: none"> <li>• None</li> </ul>   |

**Figure 12G**  
**Transaction Summary – Explode BOM's (Process 4.3.4)**



- |   |   |
|---|---|
| Initial Processing                      | • Sort BOM items on item number and on date |
| User Workflow &<br>Resultant Processing | • Typical                                   |
| Notes                                   | • None                                      |